April 2025

Brisbane Baylands Specific Plan

Draft Environmental Impact Report

State Clearinghouse #2006022136

Prepared for
City of Brisbane

Prepared by
Metis Environmental Group & ESA

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BAYLANDS SPECIFIC PLAN DRAFT EIR FACT SHEET

PROJECT INFORMATION

1.	**Project Title:**	Baylands Specific Plan
2.	**Lead Agency:**	City of Brisbane 50 Park Place Brisbane, CA 94005
3.	**Contact Person:**	John Swiecki, AICP Community Development Director (415) 508-2120 baylands@brisbaneca.org
4.	**Project Applicant:**	Sunquest Properties, Inc.
5.	**Applicant's Representative:**	Baylands Development Inc.
6.	**Project Size and Location:**	680.1 acres within the City of Brisbane, San Mateo County, located west of the US 101 freeway, south of the San Mateo/San Francisco County line, east of Bayshore Blvd.
7.	**Regional and Local Access:**	Regional Access – US 101 Freeway Local Access – Bayshore Boulevard, Tunnel Avenue, Sierra Point Parkway
8.	**Public Services:**	Water – City of Brisbane (existing), California Water Service Company (proposed) Sewer – Bayshore Sanitary District Police – City of Brisbane Fire – North County Fire Authority Schools – Bayshore Elementary School District (PK–8), Brisbane School District (TK–8), Jefferson Union High School District (9–12)
9.	**Existing General Plan Designations:**	Baylands Planned Development (Residential Permitted) Baylands Planned Development (Residential Prohibited) Marsh/Lagoon/Bayfront Public Facilities and Parks Heavy Commercial (Beatty Subarea)
10.	**Proposed General Plan Designations:**	Baylands Planned Development (Residential Permitted) Baylands Planned Development (Residential Prohibited) Marsh/Lagoon/Bayfront Public Facilities and Parks
11.	**Existing Zoning:**	Commercial Mixed-Use (C-1), Marsh Lagoon Bayfront (MLB), Manufacturing (M-1)

12. Proposed Zoning: Baylands Specific Plan

13. Project Description: Specific Plan to accommodate development of 2,200 dwelling units and 6.5 million square feet of commercial office, with an additional 500,000 square feet of hotel use; acquisition of a water supply by establishing the California Water Service Company as the water service agency for the Baylands, Sierra Point, and Beatty subareas of the City of Brisbane. 157 acres of the site's 558.3-acre existing land area[1] will be devoted to conservation and outdoor recreation.

Proposed on-site potable and recycled water infrastructure includes a water recycling facility, water storage tanks, and pipeline system. Off-site facilities include pipelines to deliver recycled water to users in South San Francisco and minor off-site improvements to Brisbane's potable water system (e.g., meters at connections to the SFPUC regional water system).

Baylands infrastructure also includes extension of Geneva Avenue east from Bayshore Boulevard with a bridge over the Caltrain right-of-way, extension of Sierra Point Parkway north to Geneva Avenue, and realignment of Lagoon Road; a grade 6–8 middle school along with conversion of the existing Bayshore School to PK–5 elementary school; relocation of the City's existing fire station and corporation yard along with development of a new fire station and corporation yard within the Baylands; a 55-acre solar field, distributed local battery storage, and a 250-megawatt utility-scale battery storage facility, new switching substation, and an under-ground connection to and improvements at the existing PG&E Martin Substation.

14. Socioeconomic Characteristics of Specific Plan Buildout

Housing:	2,200 dwelling units
Commercial/Office:	6.5 million square feet
Hotel:	500,000 square feet (800 rooms, est.)
Population:	4,905 residents (est.)
Employment:	19,480 employees (est.)

14. Approvals being Considered by the City of Brisbane:

General Plan Land Use Element Amendment to realign the northern boundary of the Baylands Subarea east of the Caltrain right-of-way to conform to the northern boundary of the Specific Plan area.

General Plan Circulation Element Amendment to (1) realign Lagoon Avenue to provide direct access to the southbound US 101 freeway on- and off-ramps adjacent to Sierra Point Parkway within the Baylands, (2) extend Sierra Point Parkway from its current terminus at the US 101 freeway southbound on- and off-ramps within the Specific Plan area north to Geneva Avenue, (3) add proposed Baylands roadways to the General Plan circulation map, (4) designate the Geneva Avenue extension through the Baylands as a Regional Arterial; (5) add a new roadway type for "Green Local Street;" and (6) remove Industrial Way as a General Plan roadway.

[1] Approximately 26 acres of existing land area are subject to sea level rise and will experience daily inundation by the year 2100, reducing the Baylands' land area to 532.3 acres and 147.8 acres of open water within the Brisbane Lagoon and Visitacion Creek.

Baylands Specific Plan, including:

- **Change of Zone** from Commercial Mixed-Use (C-1), Marsh Lagoon Bayfront (MLB), Manufacturing (M-1) to Baylands Specific Plan
- **Amendments to Title 17, Zoning, of the Brisbane Municipal Code** to establish the land use regulations and development standards set forth in the Baylands Specific Plan as the regulatory authority governing development within the Baylands Specific Plan area.

Development Agreement specifying terms and conditions for development of the Baylands along with identifying public benefits to be provided by Baylands development.

Bayshore Boulevard Mobility Plan proposing reconfiguration of the roadway from four lanes (two in each direction) to two lanes (one in each direction), along with turn lanes, a multi-use trail, and bus turnouts.

Relocation of the existing North County Fire Authority Brisbane Fire Station No. 81, conversion of the existing station for use as a training facility, and establishment of a new station within the Baylands.

Construction of a Middle School within the Baylands and conversion of the existing Bayshore School to an Elementary School.

15. Draft EIR Review Period:

April 3, 2025, to September 2, 2025.

16. Significant Unavoidable Impacts:

Air Quality. The Baylands Specific Plan would cause a net increase in emissions of non-attainment criteria pollutants (ROG, NO_X, PM_{10}, $PM_{2.5}$) exceeding BAAQMD Regional Criteria Pollutant Significance Thresholds during construction and operations.

Greenhouse Gas Emissions. The Baylands Specific Plan would cause a net increase in total greenhouse gas (GHG) emissions.

Noise. The use of impact pile driving for construction of buildings over 5 stories in height in proximity to occupied residential and office buildings would cause unavoidable adverse effects, particularly if used for multiple buildings at the same time, until construction of such buildings is completed.

Increases in noise from Baylands-generated traffic would exceed applicable standards along 3 of the 15 analyzed roadway segments.

Operation of Specific Plan land uses would exceed ambient pre-development noise levels by more than 5 dBA.

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CONTENTS

DRAFT ENVIRONMENTAL IMPACT REPORT VOLUME 1

DRAFT ENVIRONMENTAL IMPACT REPORT VOLUME 1 (CONTINUED)

DRAFT ENVIRONMENTAL IMPACT REPORT VOLUME 1 (CONTINUED)

DRAFT ENVIRONMENTAL IMPACT REPORT VOLUME 1 (CONTINUED)

DRAFT ENVIRONMENTAL IMPACT REPORT VOLUME 1 (CONTINUED)

DRAFT ENVIRONMENTAL IMPACT REPORT VOLUME 1 (CONTINUED)

DRAFT ENVIRONMENTAL IMPACT REPORT VOLUME 2

DRAFT ENVIRONMENTAL IMPACT REPORT VOLUME 2 (CONTINUED)

DRAFT ENVIRONMENTAL IMPACT REPORT VOLUME 2 (CONTINUED)

DRAFT ENVIRONMENTAL IMPACT REPORT VOLUME 2 (CONTINUED)

DRAFT ENVIRONMENTAL IMPACT REPORT VOLUME 2 (CONTINUED)

DRAFT ENVIRONMENTAL IMPACT REPORT VOLUME 2 (CONTINUED)

DRAFT ENVIRONMENTAL IMPACT REPORT VOLUME 3

DRAFT ENVIRONMENTAL IMPACT REPORT VOLUME 3 (CONTINUED)

DRAFT ENVIRONMENTAL IMPACT REPORT VOLUME 3 (CONTINUED)

DRAFT ENVIRONMENTAL IMPACT REPORT VOLUME 3 (CONTINUED)

DRAFT ENVIRONMENTAL IMPACT REPORT VOLUME 3 (CONTINUED)

DRAFT ENVIRONMENTAL IMPACT REPORT VOLUME 3 (CONTINUED)

DRAFT ENVIRONMENTAL IMPACT REPORT VOLUME 3 (CONTINUED)

DRAFT ENVIRONMENTAL IMPACT REPORT VOLUME 3 (CONTINUED)

DRAFT ENVIRONMENTAL IMPACT REPORT VOLUME 3 (CONTINUED)

APPENDICES

FIGURES

TABLES

EXECUTIVE SUMMARY

ES.1 INTRODUCTION

In accordance with California Environmental Quality Act ("CEQA") Guidelines Section 15123, this chapter provides a summary of:

(1) The Baylands Specific Plan ("Specific Plan") and other project components;

(2) Project objectives;

(3) The physical environmental impacts that would result from Baylands Specific Plan development, including their significance, mitigation measures to avoid or reduce significant impacts, and the significance of impacts after mitigation measures are implemented;

(4) City of Brisbane ("City") and other agency approvals needed to implement the Specific Plan, areas of controversy/issues to be resolved; and

(5) Alternatives analyzed in this environmental impact report ("EIR").

The City of Brisbane is the public agency that has the principal responsibility for approving Baylands development and is therefore the CEQA lead agency for the 2025 Baylands Specific Plan project.

ES.2 PROJECT LOCATION

The Baylands Specific Plan area ("Specific Plan area," "Baylands," "Baylands site," or "site") encompasses approximately 680.1 acres (558.3 acres of existing land area[2] and 121.8 acres of lagoon) within the City of Brisbane in northeast San Mateo County. The Baylands is located along the west side of San Francisco Bay adjacent to US Highway 101 ("US 101"), immediately south of the City and County of San Francisco (see **Figure ES-1**).

[2] Approximately 26 acres of existing land area are subject to sea level rise and will experience daily inundation by the year 2100, reducing the Baylands' land area to 532.3 acres.

Figure ES-1: Regional Location

SOURCE: Metis Environmental Group, 2024

ES.3 PROJECT DESCRIPTION

ES.3.1 SPECIFIC PLAN AND OTHER PROJECT COMPONENTS

The Baylands Specific Plan project consists of the following components:

- **General Plan Amendment**
  - Modify the Land Use Element to:
    - Adjust the northerly boundary of the Baylands Subarea to reflect the northern Specific Plan boundary area east of the Caltrain right-of-way.
    - Change the land use designation for the portion of the Baylands Specific Plan currently within the Beatty Subarea from Heavy Commercial to Baylands Planned Development, Residential Prohibited.

- Modify the Circulation Element to:
  - Realign Lagoon Avenue to provide direct access to the southbound US 101 freeway on- and off-ramps adjacent to the current terminus of Sierra Point Parkway;
  - Extend Sierra Point Parkway from its current terminus at the southbound US 101 freeway ramps north to Geneva Avenue;
  - Reflect proposed Baylands roadways on the Circulation Element Figure C-3, *Proposed Circulation Improvements*;
  - Designate the Geneva Avenue extension through the Baylands as a Regional Arterial; and
  - Add "Green Shared Street" as a roadway type.

- **Specific Plan**

  The applicant, Sunquest Properties Inc. ("Sunquest") and its development manager, Baylands Development Inc. ("BDI"), collectively referred to as the "applicant," are proposing the Specific Plan.

  - The Specific Plan provides for development of 2,200 residential units clustered in the northwestern portion of the site in proximity to the Bayshore Caltrain station; 6.5 million square feet of commercial, office, retail, conference, life science, and office campus uses; 500,000 square feet of hotel use (approximately 800 rooms); a grade 6–8 middle school; and open space/open area, parks, and trails (see **Figure ES-2**, **Table ES-1a**, and **Table ES-1b**).
  - The Specific Plan also includes extensive water, recycled water, sewer, drainage, electrical, and other utilities improvements.
  - Approximately 157 acres of the site's 532.3-acre Year 2100 land area (29.5 percent) would be devoted to conservation and outdoor recreation.
  - The land use character in the northern portion of the Baylands would be transit-oriented with the highest intensity development, including residential uses combined with a mix of retail, commercial, a major office cluster, hotels, and entertainment uses. The primary focus in the west central portion of the site around the historic Roundhouse, which is to be restored for adaptive reuse, would be on lower density housing, a middle school, and campus-style office development. Lower density commercial office and infrastructure uses would be provided within the eastern portion of the site.

Figure ES-2: Proposed Land Use

SOURCE: The Baylands Specific Plan, 2025.

Table ES-1a: Proposed Land Use Program by Acreage

Land Use	Area West of the Caltrain Right-of-Way (in acres)[a]	Area East of the Caltrain Right-of-Way (in acres)[a]	Specific Plan Total
Land Area			
Residential	52.8	0.0	**52.8**
Commercial	48.8	78.3	**127.1**
Amenities Area	2.6	0.0	**2.6**
Existing Use Areas[b]	5.8[c]	32.5[d]	**38.3**
Open Space/Open Area	59.4	97.6	**157.0**
Sustainable Infrastructure	0.0	90.8	**90.8**
Roadway Rights-of-Way	37.4	26.3	**63.7**
Subtotal	*206.8*	*325.5*	***532.3***
Water			
Brisbane Lagoon	0.0	121.8	**121.8**
Existing land area that will be inundated on a daily basis due to Sea Level Rise by 2100	0.0	26.0	**26.0**
Subtotal	*0.0*	*147.8*	*147.8*
TOTAL	**206.8**	**473.3**	**680.1**

SOURCES: The Baylands Specific Plan, 2025; City of Brisbane 2024.

NOTES:

a. Acreages are based on Year 2100 land area following approximately 83 inches of sea level rise.
b. Represents lands not owned by the applicant.
c. Includes Machinery & Equipment building (2.2 acres) and existing fire station site (3.6 acres).
d. Includes Recology Facilities (3.6 acres), Golden State Lumber (5.3 acres), Bayshore Sanitation Pump Station (0.1 acres), and Kinder Morgan Tank Farm/City Corporation Yard site (23.5 acres).

Table ES-1b: Land Use Program by Dwelling Units and Building Square Footage

	Maximum Permitted		
	Dwelling Units	**Commercial Building Area (in square feet)**	**Hotel Building Area (in square feet)**
West of the Caltrain Right-of-Way	2,200	4,000,000	500,000
East of the Caltrain Right-of-Way	—	2,500,000	—
TOTAL	**2,200**	**6,500,000**	**500,000**

NOTES: The Specific Plan permits a portion of the maximum permitted 6.5 million square feet of commercial use to be located within areas designated residential in the form of:

- "**Active Ground Floor**" (AGF) uses including retail, restaurants, commercial services, offices, and public/semi-public uses permitted along specified street frontages within Low, Mid, and High-Density Residential areas. Active Ground Floor commercial uses are limited to 25,000 square feet of space within the Bayshore District.
- An unspecified amount of commercial and public/semipublic uses are permitted as "**Residential Flex Space**" (RFS) on the ground floor of residential units within Low-Density Residential areas where AGF is not allowed or required.

- **Bayshore Mobility Plan.** The primary purpose of this plan, which is being proposed by the City of Brisbane, is to enhance mobility for Brisbane residents and businesses by implementing a "road diet" along Bayshore Boulevard. The Mobility Plan proposes reducing the number of travel lanes along Bayshore Boulevard from four lanes (two in each direction) to two lanes (one in each direction) south of Geneva Avenue, along with providing a median, turn pockets, and a multi-use pathway and bicycle facilities along the corridor within the City of Brisbane.
- **Establish a second school for the Bayshore School District.** The Bayshore School District's Bayshore School currently serves grades pre-kindergarten (PK) through grade 8. To accommodate new students from the Baylands, the Bayshore School District would establish a new grade 6–8 middle school within the Baylands and convert the existing grade PK–8 Bayshore School to a grade PK–5 elementary school.
- **Establish the California Water Service Company (Cal Water) as the water agency for the Baylands, Sierra Point, and Beatty areas within the City of Brisbane.** By establishing Cal Water as the water agency for the Baylands, Sierra Point, and Beatty areas, an adequate water supply would become available for buildout of the Baylands Specific Plan, the Sierra Point and Beatty areas, and the balance of the City of Brisbane. In exchange for the provision of potable water supply by Cal Water, the proposed Baylands water recycling facility would provide up to 0.43 million gallons per day of recycled water for irrigation purposes to Cal Water for use within its South San Francisco District as well as within the Sierra Point subarea of Brisbane.
- **Relocate Brisbane's existing Fire Station No. 81 and establish a second fire station within the Baylands.** Brisbane's existing Fire Station No. 81 would be relocated from its existing site at 3445 Bayshore Boulevard to a new 2-story, 10,000-square-foot facility at 140 Valley Drive. The existing Fire Station No. 81 site would be used for firefighter training once the new station is operational. The relocated Station No. 81 would house the existing Engine Company No. 81 and temporarily house a new ladder truck company until such time as a new fire station within the Baylands would be established. When completed, the new Baylands station would house the ladder truck company and a squad.[3]

[3] "Squad" refers to a specialized company whose primary focus may be suppression but carry specialized equipment and are trained to perform hazmat, rescue, and other special functions.

ES.3.2 PROJECT OBJECTIVES

Objectives of the 2025 Specific Plan project, including its underlying purpose, are presented below, pursuant to CEQA Guidelines Section 15124(b), which requires an EIR to include a "statement of objectives sought by the proposed project." As noted in CEQA Guidelines Section 15124(b), a "clearly written statement of objectives will help the lead agency develop a reasonable range of alternatives to evaluate in the EIR and will aid the decision makers in preparing findings."

The **underlying purpose of the Baylands Specific Plan** and the development it permits is to provide for the productive reuse of this brownfield site in a manner that eliminates ongoing ecological damage and ensures the safety of all who will use the Baylands.

Project objectives for the Baylands are to:

- Implement the City's Housing Element by providing a mix of housing types, sizes, and densities that contributes to local and regional housing needs for all economic segments of the community, as well as for families and individuals of all ages and physical abilities.
- Implement the Brisbane General Plan, including General Plan Amendments GP-1-18 (Measure JJ) and GP-1-19.
- Preserve and enhance the site's natural resources and historic features within a system of permanent open space that:
    - Restores, and enhances wetlands and natural habitats within the Baylands;
    - Promotes visual connectivity between the Baylands, San Bruno Mountain, and San Francisco Bay;
    - Adapts to climate change and sea level rise; and
    - Provides a range of recreational opportunities and open space experiences for Baylands residents and workers, as well as for the larger Brisbane community.
- Enhance Brisbane's economic vitality by ensuring that Baylands development will be revenue positive for the City.
- Establish the Baylands as a leading model of sustainable development consistent with the principles of the City's Sustainability Framework for the Baylands.
- Attract office-based employment to the Baylands that provides a broad range of high-paying jobs as well as training and advancement opportunities for the community's young adults.
- Enable residents, workers, and visitors to be less dependent on cars.

ES.4 ANTICIPATED DISCRETIONARY ACTIONS AND APPROVALS

ES.4.1 APPROVALS REQUESTED FROM THE CITY OF BRISBANE

Baylands development would require several approvals from the City of Brisbane, including:

- **General Plan Land Use Element Amendment** to:
    - Adjust the northerly boundary of the Baylands Subarea to reflect the northern boundary of the Specific Plan area east of the Caltrain right-of-way and thereby place the entirety of the Specific Plan area within the Baylands Subarea.
- **General Plan Circulation Element Amendment** to:
    - Realign Lagoon Avenue to provide direct access to the southbound US 101 freeway on- and off-ramps adjacent to the current terminus of Sierra Point Parkway;
    - Extend Sierra Point Parkway from its current terminus at the US 101 freeway on- and off-ramps north to Geneva Avenue;
    - Add Baylands roadways to the circulation map; and
    - Add a new roadway type, "Green Local Street."
- **Approval of the Baylands Specific Plan**, along with:
    - **Change of Zone** from Commercial Mixed-Use (C-1), Marsh Lagoon Bayfront (MLB), Manufacturing (M-1) to Baylands Specific Plan.
    - **Amendments to Title 17, Zoning, of the Brisbane Municipal Code** to establish the land use regulations and development standards set forth in the Baylands Specific Plan as the regulatory authority governing development within the Baylands Specific Plan area.
    - **Development Agreement** with the City of Brisbane specifying terms and conditions for Baylands development.

ES.4.2 APPROVALS AND PERMITS REQUIRED FROM RESPONSIBLE AND TRUSTEE AGENCIES

In addition to City approvals, Baylands development would require permits, authorizations, or other approvals from the following state, regional and local public agencies other than the City of Brisbane.

- City of Brisbane and California Water Service Company (Cal Water) agreement to provide water service for the Baylands, Sierra Point, and Beatty Subareas would require approvals from the following state, regional and local public agencies.
    - Approval by the San Mateo County Local Agency Formation Commission to identify Cal Water rather than the City of Brisbane as the water service agency for the Baylands and Sierra Point Subareas.
    - Approval by the California and San Francisco Public Utilities Commissions for Cal Water to expand its service area to include the Baylands and Sierra Point areas.
    - Approval by the Regional Water Quality Control Board and the San Francisco Public Utilities Commissions of a discharge permit for the Baylands Recycled Water Facility.
- Agreements to coordinate and implement roadway and other transportation improvements and services within and adjacent to the Baylands Specific Plan area between the City of Brisbane and the City and County of San Francisco, San Francisco County Transportation Authority, San Mateo Congestion Management Agency, San Mateo County Transit District, Caltrans, and the City of Daly City.
- Approvals of requests by developers of the Baylands for habitat, recreational improvements, and/or roadway bridge improvements within:
    - The 100-foot shoreline band along Visitacion Creek and the Brisbane Lagoon (Bay Conservation and Development Commission [BCDC]); and
    - Filled and unfilled tidelands and submerged lands sold into private ownership by the State Lands Commission that remain submerged (State Lands Commission).
- Lease(s) for any habitat or recreational improvements within the Guadalupe Canal (State Lands Commission) within those portions of the Baylands subject to State Lands Commission jurisdiction.
- Approval of requests by developers of the Baylands for infilling of existing rip rap lining the Brisbane Lagoon (BCDC, Regional Water Quality Control Board [RWQCB], State Lands Commission, US Army Corps of Engineers).

- Water quality certification, NPDES permit, and waste discharge requirement compliance for future Baylands development (RWQCB).
- Incidental Take Permit, if necessary, for Baylands development affecting special-status species (CDFW).
- Streambed Alteration Agreement (CDFW) and Section 404 permit (Corps of Engineers) for activities in or around Visitacion Creek as part of landfill closure requirements of the RWQCB.
- Bay Trail Review (Association of Bay Area Governments) requested by future developers of the Baylands.
- Air quality permits (BAAQMD) requested by future developers of and specific uses within the Baylands requiring such permits.
- Approval for construction of the Geneva Avenue bridge crossing over the existing Caltrain right-of-way (California Public Utilities Commission).
- Approval for construction of an electric powered conveyor system over the existing Caltrain right-of-way to move soil from the eastern to the western portion of the Baylands in lieu of soil movement via truck (California Public Utilities Commission).
- Approval of utility-scale battery storage facility requested by developers of the Baylands (California Independent System Operator).
- Approval for development of an electrical substation, along with electrical facilities undergrounding of existing overhead electrical lines within the Baylands, construction of new underground electrical facilities to serve new development, connections of facilities to the existing Pacific Gas and Electric (PG&E) Martin Substation, and improvements within the Martin Substation (California Public Utilities Commission) as would be requested by PG&E.
- Encroachment permits for construction activities that may need to occur within the California Department of Transportation right-of-way (Caltrans).
- Encroachment permits should any construction be required within the right-of-way owned by the Peninsula Corridor Joint Powers Board (Caltrain).
- Required approvals for location, design, and construction of a middle school to serve Baylands students (State of California and Bayshore School District).

ES.5 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

ES.5.1 SIGNIFICANT UNAVOIDABLE IMPACTS

This EIR identifies the following Significant Unavoidable impacts that would result from implementation of the proposed Specific Plan.

- Impact AQ-1: Emissions of Criteria Air Pollutants for which the Basin is in Nonattainment
- Impact GHG-1: Specific Plan Area Greenhouse Gas Emissions
- Impact NOI-1: Temporary Increase in Ambient Noise Levels during Construction
- Impact NOI-2: Permanent Increase in Ambient Noise Levels from Stationary Sources
- Impact NOI-3: Permanent Increase in Ambient Noise Levels along Roadways

ES.5.2 IMPACTS FOUND NOT TO BE SIGNIFICANT

The analyses undertaken during preparation of this EIR determined that no impacts would result in relation to the following.

a. Agricultural and Forestry Resources

The Baylands does not contain any Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, nor does such land exist within the City of Brisbane. In addition, no forestry resources occur on or in the vicinity of the Baylands or within the City of Brisbane.

The Baylands and adjacent lands are designated as "Urban and Built-up Land" according to the California Department of Conservation, California Important Farmland Finder map system (2016). There are no lands within or adjacent to the Baylands that would meet the definition of timberland or could qualify for establishment of a timberland preserve.

The Baylands site is not designated or zoned for agricultural or forestry use by the City of Brisbane, nor is the site subject to a Williamson Act contract.

b. Mineral Resources

Neither the City's General Plan nor the State of California have identified the Brisbane Baylands or any surrounding land as a potential location for extraction or management of mineral resources of state-wide, regional, or local significance. Therefore, no impacts on mineral resources would result from the Baylands Specific Plan.

ES.5.3 ENVIRONMENTAL IMPACTS

a. Land Use and Planning

Impact LUP-1: Physically Divide an Existing Community

Less than Significant with Mitigation Incorporated – Construction

Less than Significant – Operations

Hauling soil from the eastern to the western portion of the Baylands along Tunnel Avenue and other two-lane roadways would result in traffic delays and reduced connectivity, particularly if queueing of haul trucks spills out onto public roadways adjacent to sites being graded. Construction activities within roadway rights-of-way would be required to meet applicable requirements for issuance of encroachment permits that would minimize disruptions and ensure traffic safety.

The planned realignment of Lagoon Road would result in temporary partial or complete closures of Lagoon Road and/or Sierra Point Parkway, which would be reduced to less than significant through required construction management plans and implementation of EIR mitigation measures. No new physical barriers to mobility would be constructed, nor would existing connectivity be substantially diminished as the result of construction traffic. The Specific Plan would enhance mobility by extending Geneva Avenue to the US 101 freeway providing and providing safe turning movements for Brisbane residents and businesses onto and from Bayshore Boulevard along with enhanced pedestrian and bicycle facilities.

Implementation of Mitigation Measures MM LUP-1a and MM LUP-1b would maintain connectivity (one through lane in each direction) along Lagoon Road between Tunnel Avenue and Sierra Point Parkway, as well as Sierra Point Parkway between the US 101 southbound and northbound on- and off-ramps at all times throughout Baylands construction, thereby reducing construction impacts to less than significant. In addition, Mitigation Measure AQ-1f would require installation of a conveyor system to move soils from the eastern to the western portion of the Baylands in lieu of truck hauling.

Program EIR Mitigation Measures

MM LUP-1a: Construction Management Plans (Program EIR Mitigation Measure 4.N-12). In conjunction with all construction permits, site-specific development projects shall develop, submit for City review and approval, and implement Construction Management Plans that specify measures that would reduce impacts on motor

vehicle, bicycle, pedestrian, and transit circulation. Construction Management Plans shall include, but not necessarily be limited to, the following:

- Location of construction staging areas for materials, equipment, and vehicles.
- Notification procedures for adjacent property owners and public safety personnel regarding timing of major deliveries, detours, and lane closures.
- Identification of haul routes for movement of construction vehicles that would minimize impacts on vehicular and pedestrian traffic, circulation, and safety; and provision for monitoring surface streets used for haul routes so that any damage and debris attributable to the haul trucks can be identified and corrected by the project applicant.
- Provisions for removal of trash generated by construction activity.
- A process for responding to, and tracking, complaints pertaining to construction activity, including identifying an on-site complaint manager.

Additional Mitigation Measures

MM LUP-1b: Maintain Connectivity along Area Roadways during Construction. The Construction Management Plan required by Mitigation Measure MM LUP-1a for City approval in compliance with Brisbane Municipal Code Chapter 12.04 shall include provisions to meet the following performance standards:

- Access to the following facilities shall remain open all times throughout Baylands construction:
  - Recology solid waste management facilities;
  - Golden State Lumber Company;
  - Kinder Morgan tank farm;
  - City of Brisbane Corporation Yard; and
  - Bayshore Sanitary District pump station.
- Turning movements at existing intersections shall be maintained at all times during construction. If existing crosswalks and bus stops cannot feasibly be available for use at all times during construction, appropriate alternative facilities shall be provided.
- Site grading and each site-specific development project shall provide sufficient construction staging in appropriate locations such that construction staging, including construction vehicles or materials, will

not block bicycle; pedestrian facilities, or transit facilities; roadway travel lanes; or parking garage access.

- The identification of haul routes for movement of construction vehicles shall be designed to minimize impacts on vehicular and pedestrian traffic, circulation, and safety through use of arterials or designated truck routes, avoiding travel on local or collector roadways through residential neighborhoods, such as Blanken Avenue, and provision of traffic control measures at construction driveways as required through Brisbane Municipal Code Chapter 12.04.
- Identify the routes that construction vehicles will use for the delivery of construction materials (e.g., lumber, tiles, piping, windows) to access the site, including any needed traffic controls and detours.
- Allow hauling or transport of oversize loads between 9:00 a.m. and 3:00 p.m. only, Monday through Friday, unless approved otherwise by the City Engineer.
- Require all construction-related parking and staging of vehicles to be kept out of the adjacent public roadways and instead be kept on site.

Impact LUP-2: Conflict with Adopted Plans, Policies, or Regulations

Less than Significant with Mitigation Incorporated

the Baylands Specific Plan would be inconsistent with the following General Plan Policies and Programs:

- **General Plan Policy LU.11 and Program BL.3b** in relation to views of San Francisco Bay, which causes a significant Aesthetics and Visual Resources Impact. Mitigation Measures MM AES-1a and MM AES-1b would reduce the impact to less than significant and therefore achieve consistency with this policy and program.
- **Policy 176** in relation to noise from pile driving operations required for constructing buildings (Impact NOI-1). Mitigation Measures MM NOI-1a through MM NOI-1e would minimize impacts associated with pile driving by requiring alternative methods for construction of pile foundations where geologic conditions permit.

The Specific Plan would also be inconsistent with the Metropolitan Transportation Commission's (MTC) Transit-Oriented Communities Policy (Resolution No. 4530) because it would permit (1) residential development types with an average density below 25 units per acre and not require sufficient affordable housing within ½ mile of the Bayshore Caltrain station, and (2) lower density housing to exceed the maximum parking space standards included in

Resolution No. 4530, and not requiring a minimum average floor area ration of 2.0 within ½ mile of the Bayshore Caltrain station.

These inconsistencies would exacerbate the Specific Plan's significant air quality and GHG emissions impacts.

Mitigation Measures

MM LUP-2: Consistency with General Plan Policy C.41 and the Metropolitan Transportation Commission's Transit-Oriented Communities Policy (Resolution No. 4530). The Specific Plan shall be revised to include the following requirements:

- **Residential Development Intensity.** Residential development within ½ mile of the Caltrain Bayshore Station shall average a minimum of 25 dwelling units per acre as measured on a block-by-block basis.
- **Housing Affordability.** A minimum of 15 percent of dwelling units within ½ mile of the Caltrain Bayshore Station shall be deed-restricted affordable to low-income households.
- **Maximum Parking Ratios.** The maximum per unit parking ratio for Multi-Family Low, Townhome, and Duplex/Single Family housing types shall be reduced from 1.25 to 1.0 spaces per unit.
- **Commercial Office Development Intensity.** Commercial office development within one-half mile of the Caltrain Bayshore Station shall have an average minimum FAR of 2.0 as measured on a block-by-block basis.

b. Population and Housing

Impact POP-1: Inducement of Substantial Unplanned Growth

Less than Significant

Baylands development would be consistent with the Brisbane General Plan (1,800 to 2,200 dwelling units, 6.5 million square feet of commercial use, and an additional 500,000 square feet of hotel use). Thus, direct population and employment growth associated with the Baylands Specific Plan would constitute *planned* rather than *unplanned* growth.

Although the Baylands Specific Plan would remove water supply as an obstacle to growth within the City of Brisbane, the additional water supply available to the City would be used to accommodate General Plan buildout. In addition, recycled water would be delivered to existing uses within South San Francisco and the resulting expanded potable water supply would be

used to reduce projected dry year deficits for projected future development. Thus, the resulting growth would be considered to be *planned* rather than *unplanned* growth. Thus, the impact is less than significant.

Impact POP-2: Need for Replacement Housing or Commercial/Industrial Buildings

Less than Significant

Physical environmental impacts related to displacement of housing and business will be less than significant for the following reasons:

- There is no existing housing within the Baylands.
- All off-site infrastructure associated with Baylands development will be located within existing roadway rights-of-way.
- Although approximately 231,400 square feet of existing industrial businesses within the Baylands and the existing business at 140 Valley Drive would be displaced as of November 2022 by Baylands grading and development, there is more than 2.6 million square feet of vacant industrial space within Brisbane and adjacent communities and more than 6.3 million square feet of vacant industrial space within San Francisco and San Mateo counties. As a result, displacement of industrial businesses from the Baylands would not necessitate new construction of replacement industrial development for which significant physical environmental impacts would occur.
- Operational impacts of businesses relocating from the Baylands would continue to be generated at their new locations rather than within the Baylands. Impacts of the 231,400 square feet of existing industrial businesses within the Baylands and at 140 Valley Drive that would relocate are small in relation to the environmental baseline for San Francisco and San Mateo counties and would be spread out into various different locations.
- Existing grades and roadway access to business adjacent to or completely surrounded by the Specific Plan area would be maintained at all times through Baylands development such that there would be no displacement of these existing businesses and replacement development is not required.
- Baylands development would displace Golden State Lumber's laydown area and its ability to receive and ship lumber by rail, adversely affecting its business operations, the resulting adverse effects would be economic and therefore does not constitute a physical environmental effect as defined by CEQA. Such adverse economic effects would be addressed through the Baylands' planning review process.

Impact POP-3: Housing for All Economic Segments of the Community

Less than Significant

The Specific Plan provides sufficient land for housing at appropriate densities to meet Housing Element-quantified objectives for the production of housing to meet the needs of all economic segments of the community as outlined in the City's certified 2023–2031 Housing Element. The Baylands Specific Plan would therefore have a less than significant impact related to directly or indirectly inhibiting the City's ability to provide housing for all economic segments of the community.

Impact POP-4: Urban Decay

Less than Significant

Baylands development would not result in urban decay and impacts would be less than significant for the following reasons:

- Development of the Specific Plan will occur in phases and be driven by market conditions and tenant demand. To the extent that demand for Baylands office/life science buildings is less robust than expected, then construction would slow down to better align with demand. This would mean that development timing of later phases would be pushed further out into the future.

  The existing inventory of space in Brisbane and South San Francisco is relatively new, with many buildings less than 20 to 25 years old. Additionally, the market has a highly concentrated ownership pattern, with large, experienced companies controlling most of the space. This suggests that these landlords have the wherewithal to successfully maintain, market, and re-tenant large vacancies should tenant movement to the Baylands occur.
- Baylands residents, employees, and hotel guests would generate approximately $265.8 million more in retail sales at full buildout than retail sales at Baylands businesses. Thus, even if Baylands development would divert some sales away from existing retailers, Specific Plan development would generate substantially greater new retail sales to backfill any diverted sales.

c. Aesthetic Resources

Impact AES-1: Adverse Effects on a Scenic Vista

Less than Significant with Mitigation Incorporated

Baylands development would impede scenic views of San Francisco Bay, Brisbane Lagoon, and San Bruno Mountain from several public viewpoints due to the concentration of development

within the western portion of the site and the number of taller (20+ story) buildings proposed along the Caltrain right-of-way.

Mitigation Measures MM AES-1a and MM AES-1b would reduce impacts resulting from the proposed 20+ story towers along the west side of the Caltrain right-of-way, which partially block views of the Bay and San Bruno Mountain. These measures would limit the height of buildings within the western portion of the Baylands 12 stories (or 150 feet) for commercial buildings and 8 stories (or 100 feet) for residential buildings. Similarly, the significant visual impacts associated with the proposed buildings up to 100 feet in height east of the Caltrain right-of-way would be reduced with implementation of Mitigation Measure MM AES-1a, as development would be limited to 6 stories (80 feet) in height. The reduction in building height would allow the public to view more of San Bruno Mountain and its ridgelines, the San Francisco Bay, and the Brisbane Lagoon. Further, Mitigation Measure MM AES-1c would reduce significant impacts by providing view corridors for the public to view scenic resources between Baylands buildings. These view corridors would break up solid masses of buildings such that public views of scenic resources would not be substantially or completely blocked.

Program EIR Mitigation Measures

MM AES-1a: Maintain Views of Scenic Resources (Program EIR Mitigation Measure 4.A-1a). Development within 350 feet of the eastern boundary of the Baylands Specific Plan area (US Highway 101) shall be designed to avoid blockage of views of the Bay shoreline by limiting the height of buildings within 350 feet of US Highway 101 to a maximum height of 80 feet based on the grading plan included in the Brisbane Baylands Infrastructure Plan (January 2023).

Additional Mitigation Measures

MM AES-1b: Additional Provisions to Maintain Views of Scenic Resources. To further reduce loss of scenic views of San Francisco Bay and San Bruno Mountain, building heights within the area west of the Caltrain right-of-way shall be limited to no more than:

- 12 stories (150 feet) for office buildings
- 8 stories (100 feet) for residential buildings

MM AES-1c: View Corridors. The Specific Plan shall be revised to incorporate objective development standards intended to break up views of solid masses of buildings from Bayshore Boulevard and the US 101 freeway by providing for view corridors either through the Baylands or to internal open space areas/open areas such that the public would be able to view scenic resources including the San Bruno Mountain and its adjacent ridgelines, San Francisco Bay, the Brisbane Lagoon, and internal open space/open areas in between Baylands buildings.

Impact AES-2: Physical Effects on Scenic Resources

Less than Significant with Mitigation Incorporated

Due to the lack of a designated (or eligible) scenic highway within view of the Baylands, development permitted by the proposed Specific Plan would not damage scenic resources within a state scenic highway corridor. Impacts would, therefore, be less than significant.

The Specific Plan provides for both preservation of and improvements to existing scenic resources within the site, including Icehouse Hill, Brisbane Lagoon, and Visitacion Creek. Habitat areas and wetlands within Visitacion Creek, on Icehouse Hill, and along the edges of Brisbane Lagoon would be restored and enhanced. Trails on Icehouse Hill would preserve habitat areas. While manufactured slopes would typically be no more than 6 to 10 feet high, newly constructed trails would be seen as long "ribbons" of bare ground. The combination of Mitigation Measure MM AES-2 Mitigation Measures MM BIO-1a through MM BIO-1c would ensure that Icehouse Hill trails would minimize site grading, removal of vegetation and resulting visual impacts.

Mitigation Measures

MM AES-2: Design and Restoration of Manufactured Slopes on Icehouse Hill. Trails on Icehouse Hill shall be limited to the minimum necessary width for safe two-way travel (typically 36-inches wide with 60-inch wide passing areas approximately every 1,000 feet along the trail). Manufactured slopes constructed for trails on Icehouse Hill shall be revegetated with non-irrigated, non-invasive vegetation that is visually and biologically compatible with adjacent existing natural vegetation. Such revegetation shall use plant material of varying heights to create an undulating appearance.

Where manufactured slopes over 10 feet in height cannot be avoided, slopes shall be contoured or undulated to produce a naturalized appearance, unless such slope design would conflict with geotechnical recommendations approved by the City Engineer, and/or require higher slopes that would disturb sensitive vegetation.

Impact AES-3: Consistency with Visual Quality Policies and Programs

Less than Significant with Mitigation Incorporated

Specific Plan development would urbanize the Baylands with substantially greater development intensity and buildings that are taller, larger, and more abundant and closely spaced, including a row of 20+ story towers along the Caltrain rail line that would be the tallest buildings within Brisbane and adjacent developed areas. Baylands development would also impede scenic views of San Francisco Bay, Brisbane Lagoon, and San Bruno Mountain from

several public viewpoints and present a solid mass of buildings, particularly at the intersection of Geneva Avenue and Bayshore Boulevard.

As documented in the discussion of Impact AES-1 and documented in **Table 4.5-2**, Baylands development would impede scenic views of San Francisco Bay, Brisbane Lagoon, and San Bruno Mountain from several public viewpoints and present a solid mass of buildings, particularly at the intersection of Geneva Avenue and Bayshore Boulevard. In the absence of specific screening requirements in the Specific Plan for facilities within the Sustainable Infrastructure area along the north side of Geneva Avenue, Specific Plan development could present a cluttered or unkept appearance at the entrance to the Baylands and City of Brisbane. Specific Plan design guidelines would permit development inconsistent with the standards of Municipal Code Section 17.42.040.

Mitigation Measures MM AES-1a through MM AES-1c, along with MM AES-3, would achieve consistency with visual quality-related policies and programs set forth in the Brisbane General Plan and Municipal Code, thereby attaining a complementary visual relationship between Baylands development and:

- Existing and planned development surrounding the Baylands;
- The area's overall topography;
- Brisbane Lagoon;
- San Bruno Mountain;
- San Francisco Bay; and
- Entrances to Central Brisbane.

This would be accomplished by reducing the height of the tallest buildings within the Baylands and providing view corridors for the public to view scenic resources and open space/open areas between buildings within the Baylands.

Mitigation Measure MM AES-3 would mitigate impacts related to a lack of screening of infrastructure facilities along the north side of Geneva Avenue by providing landscaping along this important roadway entry to the City, thereby attaining a complementary visual relationship between the Specific Plan and surrounding development as well as the area's overall topography.

Mitigation Measures

MM AES-3: Visual screening of infrastructure along the north Side of Geneva Avenue. The design of infrastructure facilities and westbound right-of-way along Geneva Avenue between the US 101 freeway and the Geneva Avenue bridge shall be provided with a combination of berms, decorative walls, and landscaping to

screen views of infrastructure facilities along the north side of the roadway in accordance with the required findings for a design permit set forth in Brisbane Municipal Code Chapter 17.42.

Impact AES-4: Night Lighting

Less than Significant with Mitigation Incorporated

Specific Plan development would generate nighttime lighting over a broad area that is currently largely dark at night. Specific Plan Section 3.8 sets performance standards for Baylands to avoid light trespass.

Because Specific Plan Section 3.8 prohibits some but not all sources from having light emitted above 90 degrees, nighttime lighting would be permitted to be projected above the horizontal plane from the bottom of the lamp, which would be inconsistent with Municipal Code Chapter 15.88 and contribute to sky glow. In addition, the Specific Plan does not provide limitations on the amount of outdoor lighting consistent with Municipal Code Section 15.88 and would therefore contribute to sky glow.

Mitigation Measure MM AES-4a requires that Baylands development comply with the dark night sky performance standards set forth in Threshold AES-4. Mitigation Measure MM AES-4b ensures compliance with Municipal Code Chapter 15.88, Dark Sky Ordinance, and additional requirements to reduce the adverse effects of nighttime lighting on the area's dark night sky. Together, these measures ensure compliance through a requirement for preparation and review of a photometric analysis and lighting plan for site-specific development projects prior to issuance of building permits.

Program EIR Mitigation Measures

MM AES-4a: Outdoor Lighting Standards (Program EIR Mitigation Measure 4.A-4a). All development within the Baylands site shall comply with the following lighting design standards in order to minimize Baylands development lighting:

- A master plan for street and parking lot lighting shall be approved by the City prior to final approval of design plans for roadways within the Brisbane portion of the Specific Plan area.
    - All streets within the Specific Plan area shall have uniform lighting standards with regard to style, colors, and materials in order to ensure consistency with design.
    - Parking lot lighting shall be of the same source of illumination as street lighting so as to ensure uniformity of night lighting color.

- Due to their high energy efficiency, long life, and spectral characteristics, Narrow-Spectrum Amber LEDs shall be the preferred illumination source throughout the Brisbane portion of the Specific Plan area.

- A photometric analysis and lighting plan shall be prepared for each development project to demonstrate compliance with applicable nighttime lighting standards, requirements, and mitigation measures. The photometric analysis shall include an assessment of potential lighting impacts based on the height, location, light fixtures, direction, illumination intensity, and hours of operation. The lighting plan shall be submitted to the Community Development Department and City Engineer for final approval prior to approval of a building permit.

  When reviewing illumination plans, the City will review the following factors to determine the level of illumination required.

  - ***Purpose:*** The function and activities for the planned area;
  - ***Safety:*** The level of comfort and security needed to be provided;
  - ***Aesthetics:*** The overall appearance of proposed lighting with respect to the Baylands and surrounding community; and
  - ***Impacts:*** The extent to which proposed lighting minimizes impacts on adjacent land uses, maintains the area's dark night sky, and conserves energy.

Additional Mitigation Measures

MM AES-4b: Sky Glow Prevention. Baylands development shall comply with the provisions of Brisbane Municipal Code Chapter 15.88 and the following additional requirements.

1. No site-specific development project within the Specific Plan area may be permitted to provide nighttime lighting that exceeds:
   a. 1.75 lumens per square foot of developed lot area within a residential parcel;
   b. 3.5 lumens per square foot of hardscape area within a commercial, amenities, public facility, or sustainable infrastructure parcel; or
   c. 0.35 lumens per square foot of trail or hardscape area within a park or open space area.

2. Luminaires emitting more than 1,000 lumens shall be fully shielded and emit no more than 5 percent of their total lumen output above 80 degrees from the bottom of the lamp.
3. The maximum luminous or illuminated surface area of any individual sign shall not exceed 100 square feet.
4. External illumination of monument and other signage shall be mounted above the sign and directed downward.

Impact AES-5: Daytime Glare

Less than Significant with Mitigation Incorporated

Baylands development would create new sources of substantial daytime glare, particularly in the early morning and late afternoon hours by requiring reflective building materials on building roofs as well as permitting reflective materials on building façades, thematic elements, site and building identification signage, and public art installations. Glare generated by such reflective surfaces could be exacerbated if curved surfaces are provided.

Above-ground infrastructure could also include highly reflective stainless-steel and other metal piping and cladding on structures. Glare resulting from Baylands development could produce nuisance effects within residential areas; classrooms; and parks, trails, and playgrounds, as well as adversely affect motorists along US Highway 101, Geneva Avenue, and Bayshore Boulevard by impairing vision.

Implementation of Mitigation Measures MM AES-5a and MM AES-5b would minimize the reflectivity and area of reflective materials on building façades and other surfaces. Mitigation Measures MM AES-5a and MM AES-5b would also prevent building designs and materials that generate excess glare and heat generation at ground level, as well as minimize glare from above-ground infrastructure, signage, and outdoor public art installations. This impact would therefore be less than significant with mitigation incorporated.

Program EIR Mitigation Measures

MM AES-5a: Prevent Daytime Glare (Program EIR Mitigation Measure 4.A-4b). All building exteriors within the Baylands Specific Plan area shall be composed of textured and other non-reflective materials, including high-performance tinted non-mirrored glass. Any reflective materials on building exteriors that have a light reflectivity factor greater than 30 percent shall be positioned so as to not reflect daytime glare onto the US 101 freeway or onto existing residential communities in Brisbane and Visitacion Valley. Mirrored glass shall be prohibited.

Additional Mitigation Measures

MM AES-5b: Additional Daytime Glare Protection. In addition to the requirements of Mitigation Measure MM AES-5a, Specific Plan area development shall comply with the following design standards to minimize hazard and nuisance glare:

- Reflective materials on building exteriors, including roofs, that have a light reflectivity factor greater than 30 percent shall be limited to less than 25 percent of any given wall surface, and shall not be placed on roofs.
- Concave surfaces that can serve to concentrate reflective light shall be avoided.
- Reflective façade materials that slope back from the ground surface at less than a 90° angle and can reflect high angle sunlight along the ground surface shall be avoided.
- Stainless steel and other metal surfaces on buildings, above-ground infrastructure, signage, and outdoor public art installations shall use bare or non-polished metal or be shaded or screened to avoid the generation of glare.

d. Biological Resources

Impact BIO-1: Special Status Plants, Animals, and Habitats

Less than Significant with Mitigation Incorporated

The Baylands Specific Plan area and surrounding areas support habitat for special-status wildlife species and rare plants that would be impacted as part of Specific Plan development.

Rare Plants. The construction of trails on Icehouse Hill and an anticipated post-construction increase in recreation-related activities including equestrian uses would result in adverse effects on special status plants on Icehouse Hill.

Butterflies. The construction of trails and recreational facilities at Icehouse Hill, and planned management activities in this area have the potential to cause direct or indirect adverse effects on Callippe silverspot butterfly or Bay checkerspot butterfly host plants. Project activities, including general site clearing and grubbing in preparation for construction, have the potential to encounter large marble butterfly adults or larvae on weedy mustard plants that grow sporadically throughout the Specific Plan area. The butterfly does not have protected status; however, a recent petition to federally list the large marble butterfly could be adopted.

Nesting Birds. Grading or ground disturbance activities associated with site development have the potential to encounter protected nesting birds, particularly between February 1 to August

31. Construction activities within the Specific Plan area have the potential to impact nesting birds. Night lighting would not exceed the performance standards established in Section 4.5, Aesthetic and Visual Resources, and therefore would not have a significant direct or indirect impact on wildlife resources.

Mammals. Sensitive bats may be encountered during the demolition and deconstruction of on-site buildings or during tree and vegetation removal. The injury of sensitive bats or destruction of active maternity roosts constitute a significant impact.

Mitigation Measures MM BIO-1a, MM BIO-1b, and MM BIO-1c ensure that construction of trail and recreational improvements at Icehouse Hill, as well as habitat enhancement and management activities in this area, would survey for and avoid special-status plants, retain existing butterfly habitat, and maintain quality patches of nectar and host plants to support potential populations of Callippe silverspot and Bay checkerspot butterflies. Mitigation Measure MM BIO-1d establishes appropriate surveys for nesting birds, buffer areas around active nests, and time restrictions for construction activities within buffer areas, thereby protecting nesting birds. Mitigation Measure MM BIO-1e would avoid direct mortality of roosting special-status bats and disturbance of maternity roosts or winter hibernacula. Mitigation Measures MM BIO-1f and MM BIO-1g provide performance standards for special-status plants and rare butterflies. Mitigation Measure BIO-1h would require focused surveys for the large marble butterfly to determine its presence and distribution in the Specific Plan area and avoid and mitigate impacts to this species should it gain federal or state listing.

Program EIR Mitigation Measures

MM BIO-1a: Special Status Plant Surveys at Icehouse Hill (Program EIR Mitigation Measure 4.C-1a). Prior to construction, or any other Baylands development-related ground disturbance activities on Icehouse Hill, the applicant shall conduct pre-construction presence/absence surveys for special-status plants.

Initial surveys at Icehouse Hill shall be carried out in conjunction with surveys for endangered butterfly host plants described in EIR Appendix D, *Biological Resources Technical Report*. Surveys would be implemented to determine if a special-status plant species has colonized the site in the interim between the determination of baseline conditions for this EIR, and project initiation, as well as to provide site-specific direction for final trail routing and design to avoid sensitive plant species (see MM BIO-1b, Special-Status Plant Avoidance at Icehouse Hill, and MM BIO-1c, Rare Butterfly Surveys and Habitat Protection at Icehouse Hill.

Surveys shall be conducted in accordance with CNPS and CDFW rare plant survey guidelines and shall be conducted during the flowering period when each species is most readily identifiable.

In order to capture variability of special-status plant species distribution, three special-status plant surveys shall be conducted at two-week intervals during the appropriate flowering period (April to June), before commencement of any development activities on Icehouse Hill.

Any special-status plant populations shall be mapped in the field. If the presence of any special-status plant species is confirmed, a copy of the survey results shall be forwarded to the CDFW, and Mitigation Measure BIO-1b shall be implemented.

Whether or not special-status plants are identified during surveys, the additional mitigation identified in MM BIO-1c, Rare Butterfly Surveys and Habitat Protection at Icehouse Hill, shall be implemented to avoid special-status plants and butterfly host plants.

MM BIO-1b: Special-Status Plant Avoidance at Icehouse Hill (Program EIR Mitigation Measure 4.C-1b). Documented plant occurrences on Icehouse Hill shall be avoided by establishing a buffer zone of no less than 25 feet prior to Specific Plan trail construction, or other ground-disturbing activities having the potential to disturb or result in mortality of special-status plant populations. This buffer zone, whose specific width shall be determined based on site-specific analysis of proposed construction techniques and their potential for dust creation, shall be demarcated using flagging, orange fencing, or any other visual barrier between plant populations and the active disturbance footprint. Buffer distances may be increased if hydrology features would be altered as a result of trail construction.

If the City determines that disturbance or mortality is unavoidable, special-status plants shall be restored onsite in either the annual grassland or coastal scrub habitat located on Icehouse Hill. Restoration would be at a 1:1 ratio consistent with typical CDFW requirements in areas that are to remain as post-development open space, as is Icehouse Hill. The 1:1 replacement ratio shall be met at the end of five years and may therefore require initial plantings at a greater than 1:1 ratio, as determined by a qualified botanist. If feasible, special-status plants and/or seeds shall be salvaged from on-site plants and used for any replacement plantings.

To reduce impacts from off-trail use, and increased horse use, trail head signage shall be required to educate the public regarding sensitive resources and restoration that would be affected by off-trail use. Mitigation areas shall be fenced or marked for three years. Trail use rules shall be developed prior to construction, and in addition to limiting use to identified trails, may include other requirements to limit the possibility that sensitive species would be impacted.

To avoid indirect impacts to special status plant species that could occur if slope drainage or surface hydrology is modified as a result of trail construction Mitigation Measure 4.C1-g shall also be applied.

Prior to issuance of project approvals, and in coordination with state and federal permitting requirements, a five-year restoration mitigation and monitoring program shall be developed and implemented for any planting areas established to mitigate impacts to special-status species plants. Restoration success criteria shall include:

1) Establishment of mitigation site(s) at or near the location of impacts where plant restoration will occur.
2) A qualified botanist shall identify an appropriate plant palette and restoration methodology compatible with the specific impacted special status species. Mitigation sites could include existing annual grassland or coastal scrub habitat areas on Icehouse Hill, depending on site conditions and locations of special status plants found.
3) No loss in total number of individual plants in a special status plant population found on Project Site shall be verified at the end of the five-year monitoring period established in coordination with state and federal agencies with jurisdiction over these resources.

MM BIO-1c: Rare Butterfly Surveys and Habitat Protection at Icehouse Hill (Program EIR Mitigation Measure 4.C-1c). Prior to any trail-related construction, vegetation management, development, or any other ground disturbing activities taking place on Icehouse Hill, pre-construction surveys for butterfly larval host plants (*Viola pedunculata*, *Lupinus albifrons*, *L. formosus*, and *L. versicolor*) shall be conducted by a qualified invertebrate biologist with demonstrated experience working with the species to ensure avoidance of such host plants. Required surveys may be conducted in conjunction with the rare plant surveys required under MM BIO-1a, Special Status Plant Surveys at Icehouse Hill. The timing for these preconstruction surveys is further specified below.

All populations of butterfly host plants located on Icehouse Hill shall be mapped and trails shall be designed to avoid them, whether or not they are being used by butterflies at the time of the initial surveys.

All populations of butterfly host plants located on Icehouse Hill shall be inspected by a qualified invertebrate biologist, at an appropriate time of year, to determine whether or not they are being used by endangered butterflies for reproduction. If it is determined that they are being used for reproductive purposes by endangered butterflies, the specific project applicant shall contact

the USFWS to identify the appropriate consultation process prior to proceeding further with any activities on Icehouse Hill. Consultation may indicate that an Incidental Take Permit is required pursuant to the FESA.

If populations of Callippe silverspot or Mission blue butterflies are determined to be reproducing on Icehouse Hill, the property owner shall prepare and implement a Butterfly Protection Plan in coordination with the USFWS and the habitat managers for the San Bruno Mountain Habitat Conservation Plan prior to any ground-disturbing activities on or adjacent to Icehouse Hill. The plan shall include, but not be limited to, the following elements:

i. Pre-construction surveys shall be conducted during the period of identification for larval host plants and butterfly larvae in the flowering and/or breeding season immediately prior to trail construction or any other work scheduled to occur on Icehouse Hill.

ii. Trail construction on Icehouse Hill shall avoid populations of larval butterfly host plants.

iii. All trails, or alternately, sensitive habitats, shall be fenced to minimize the establishment of "informal" trails through habitats supporting special-status plants.

iv. Dogs shall be allowed on Icehouse Hill trails on leash only.

v. Interpretative signage shall be posted at trailheads explaining the presence of endangered butterflies and/or their habitat and the importance of preserving Icehouse Hill as habitat for endangered species.

Grassland habitat on Icehouse Hill shall be restored and enhanced to maintain and expand healthy populations of butterfly host plants according to the following performance standards:

- No net loss of existing butterfly host plants or damage to existing butterfly habitat or host plants from the trail and other recreational improvements, with habitat monitoring provided in years 1, 3, and 5.
- Reintroduced nectar and host plants for the Callippe silverspot, Bay checkerspot, and Mission blue butterflies achieve 50 percent cover in designated Habitat Management Areas within five years.
- Non-native invasive species such as French broom and fennel shall kept to a minimum within management areas.

MM BIO-1d: Nesting Bird Protection (Program EIR Mitigation Measure 4.C-1d). The following steps shall be taken to avoid direct losses of nests, eggs, and nestlings and indirect impacts to common and special status avian species.

Vegetation removal including removal of trees and shrubs as part of site development shall be confined to the nonbreeding season, except as provided for below. Grading or ground disturbance activities associated with site development including site remediation activities shall occur after pre-construction protocol burrowing owl surveys are conducted as described below and in the 2012 CDFW Staff Report on Burrowing Owls.

- If removal of trees and shrubs or disturbance to trees and shrubs (i.e., tree removal, tree trimming) or grading is proposed to occur between January 1 and September 15, a qualified avian biologist shall survey any habitat proposed to be modified during the nesting season (i.e., January 1 through September 15) to determine if active bird nests are present. Surveys shall occur not more than 14 days prior to tree removal or trimming. Surveys shall include all trees in line-of-sight and within 500 feet of construction for raptors, and all vegetation (including bare ground within 250 feet) for all other species. If active nests are found, tree removal and/or tree trimming shall be conducted only after the young have left the nest and the nest is no longer in use. Confirmation that the nest is no longer in use shall be provided by a qualified biologist familiar with the species.

  If the qualified avian biologist identifies active nests, a no disturbance buffer of 150 feet shall be established and monitored by a qualified avian biologist, with authority to stop work in the event construction activities encroach within the disturbance buffer thus ensuring that impacts to nesting birds would not occur.

  Survey and monitoring reports shall be submitted to City staff for review: preconstruction survey reports shall be submitted prior to initiating construction activities; monitoring reports shall be submitted weekly until activities associated with nest habitat removal or disturbance activities are completed.

- At all times of year, prior to initiating grading or ground disturbance activities associated with remediation activities required prior to site development, the following shall occur:

  - Not less than 45 days prior to site grading, a qualified biologist shall survey the site to determine the presence of active burrowing owl nests. If active nests are found passive relocation of the individuals

would be accomplished according to the CDFW standards in effect at the time of the survey including the 2012 CDFW Staff Report on Burrowing Owls.

- Results of the burrowing owl survey will be forwarded to CDFW.
- Should the results of the survey include positive findings for occupied burrows, the location and condition of the burrows shall be reported to the CDFW and an on-site mitigation plan shall be prepared for review and approval by the CDFW. Onsite mitigation shall include construction of artificial burrows at a ratio of not less than 1:1 with the burrows located away from areas permitted for use by dogs and hikers. Following construction of the artificial burrows, the existing owls shall be passively removed from their burrows using one-way trap doors. The artificial burrows shall be monitored for a period of five years to confirm occupation by the species. Monitoring reports shall be forwarded to the CDFW to document compliance with this mitigation measure.

MM BIO-1e: Special-Status Bat Roost Protection (Program EIR Mitigation Measure 4.C-4g). Applicants for demolition, grading or site-specific development projects pursuant to an approved specific plan within the Baylands shall take the following measures to avoid direct mortality of roosting special-status bats and disturbance of maternity roosts or winter hibernacula:

- A bat biologist familiar with Bay Area species shall conduct surveys of all potential bat habitat, including areas suitable for maternity roosts and/or winter hibernacula within a site proposed for development prior to initiation of construction activities, including initial grading. Surveys shall be conducted within one year prior to construction to capture current bat habitats at the site, as presence of bats could vary yearly and survey results several years before impacts occur could be inaccurate. Potentially suitable habitat shall be located visually. Bat emergence counts shall be made at dusk as the bats depart from any suitable habitat. In addition, an acoustic detector shall be used to determine any areas of bat activity. At least four nighttime emergence counts shall be undertaken on nights that are warm enough for bats to be active, or as otherwise deemed adequate by a qualified bat biologist to determine species absence. The bat biologist shall determine the type of each active roost (i.e., maternity, winter hibernacula, day or night).
- Removal or trimming of trees or demolition of buildings showing evidence of bat activity shall occur during the period least likely to affect

the bats as determined by a qualified bat biologist (generally between February 15 and October 15 for maternity roosts and between August 15 and April 15 for winter hibernacula). If active day or night (non-maternity) roosts are found, the bat biologist shall take action to allow individual bats to depart prior to tree removal or building demolition.

- The following steps shall be taken during the removal of active or suspected bat roosts:

    1. The qualified biologist shall be present during tree and structure disturbance or removal if active non-maternity or hibernation bat roosts or potential roosting habitat are present. Trees and structures with active non-maternity or hibernation roosts or potential habitat shall be disturbed or removed only under clear weather conditions when precipitation is not forecast for three days and when nighttime temperatures are at least 50°F, and when wind speeds are less than 15 mph.
    2. Trimming or removal of trees with active (non-maternity or hibernation) or potentially active roost sites shall follow a two-step removal process:
    3. On the first day of tree removal and under supervision of the qualified biologist, branches and limbs not containing cavities or fissures in which bats could roost, shall be cut only using hand tools (e.g., chainsaws).
    4. On the following day and under the supervision of a qualified biologist, the remainder of the tree may be removed, either using hand tools or other equipment (e.g., excavator or backhoe).
    5. All felled trees shall remain on the ground for at least 24 hours prior to chipping, off-site removal, or other processing to allow any bats to escape, or be inspected once felled by the qualified biologist to ensure no bats remain within the tree and/or branches.
    6. Disturbance to or removal of structures containing or suspected to contain active bat roosts (non-maternity or hibernation) or potentially active bat roosts shall be done in the evening and after bats have emerged from the roost to forage. Structures shall be partially dismantled to significantly change the roost conditions, causing bats to abandon and not return to the roost. Removal will be completed the subsequent day.

7. During construction, a no-disturbance buffer shall be created around active bat roosts being used for maternity or hibernation purposes at a distance to be determined in coordination with the CDFW.

Additional Mitigation Measures

MM BIO1f: Performance Standards for Special-Status Plant Mitigation at Icehouse Hill. If direct or indirect impacts to special-status plants are unavoidable, rare plant populations shall be restored on-site in either the annual grassland or coastal scrub habitat on Icehouse Hill. Restoration would be at a 1:1 ratio based on the number of affected plants and/or acreage of the plant population, whichever is deemed most appropriate by a qualified botanist in coordination with the city. The 1:1 replacement ratio shall be met at the end of five years and may therefore require initial plantings at a greater than 1:1 ratio, as determined by a qualified botanist. Any special-status plants and/or seeds shall be salvaged from on-site plants and used for any replacement plantings.

To reduce impacts from off-trail use, and increased horse use, trail head signage shall be required to educate the public regarding sensitive resources and restoration that would be affected by off-trail use. Mitigation areas shall be fenced or marked for a minimum of three years. Trail use rules shall be developed prior to construction, and in addition to limiting use to identified trails, may include other requirements to limit the possibility that rare plants would be impacted.

Prior to City approval of any site-specific development projects that affect special-status plants, a five-year restoration mitigation and monitoring program shall be developed and implemented for any planting areas established to mitigate impacts to such species. Restoration success criteria shall include:

1. Establishment of mitigation site(s) at or near the location of impacts where plant restoration will occur.
2. A qualified botanist shall identify an appropriate plant palette and restoration methodology compatible with the specific impacted special-status species. Mitigation sites could include existing annual grassland or coastal scrub habitat areas on Icehouse Hill, depending on site conditions and locations of special-status plants found.
3. Regular maintenance shall be performed twice annually or more frequently as needed to identify and resolve risks to mitigation sites. Site weeding shall be performed as necessary to reduce competition from non-native vegetation.

4. No loss in total number of individual plants in a special-status plant population found on the Baylands shall be verified at the end of the five-year monitoring period established in coordination with state and federal agencies with jurisdiction over these resources, as applicable. The mitigation plan shall provide contingency measures to restore and manage rare plant populations, including plant salvage, replanting, and continued monitoring and management, if the above standard is not met within five years.

MM BIO-1g: Rare Butterfly Surveys and Habitat Protection Performance Standards. The Butterfly Protection Plan identified in Mitigation Measure BIO-1c shall be included in site development plans for Icehouse Hill to be submitted to the City for review and approval prior to City approval of any ground disturbing activities within Icehouse Hill. The Plan shall include, but not be limited to, the following elements and specific performance standards to minimize impacts to listed butterfly species and their host plants and restored habitat and thereby facilitate reintroduction of listed butterfly species on Icehouse Hill as proposed by the Specific Plan:

i. Trail configurations and any non-pedestrian path uses (i.e., observation areas, educational areas, overlooks, nature play areas, gardens, and relocation of the Mission Blue Nursery), shall be sited to avoid butterfly host and nectar plants, whether or not they are being used by rare butterflies at the time of the pre-construction surveys.

ii. Trail construction may be constructed through butterfly host plant restoration areas as conceptually illustrated in Figure 4.6-4.

iii. Establishment of seasonal restrictions or a period during which horses would be permitted to occur on Icehouse Hill associated with passive recreation areas shall be implemented in a manner that coordinates best with the use pattern of special status butterflies, under consultation with a Lepidopterist.

iv. Identification of habitat management areas for the enhancement/ restoration of quality patches of nectar and host plants to contribute to the survival and/or the reintroduction of listed butterfly species (i.e., Callippe silverspot, Bay checkerspot, and Mission blue butterflies) on Icehouse Hill.

v. Identification of restoration activities that protect and support the survival of listed butterfly species, including, but not necessarily limited to, the restoration and enhancement of native grassland habitat on Icehouse Hill to maintain and expand healthy populations of butterfly

host plants and stabilize soils; development of a scrub encroachment and invasive species management plan; development of a planting palette designed by a qualified botanist using plant species that are known to support special-status butterflies, including Callippe silverspot, Bay checkerspot, and Mission blue butterfly host plants; ensuring that non-native Italian thistle (*Carduus pycnocephalus*) will not be removed from Icehouse Hill until alternate butterfly nectar plant sources have become established; and identification of potential sources of nectar and host propagules or seeds to enhance plant populations.

vi. Identification of operational actions to protect and support the survival of listed butterfly species, including, but not necessarily limited to, the fencing of trails or sensitive habitats and/or the creation of buffer areas to minimize the establishment of "informal" trails through habitats supporting butterfly host or nectar plants; providing signage that dogs shall be allowed on Icehouse Hill trails on leash only; providing interpretative signage posted at trailheads explaining the presence of endangered butterflies and/or their habitat and the importance of preserving Icehouse Hill as habitat for listed butterfly species; and development of a grazing management program, which would include seasonal restrictions on horse grazing on Icehouse Hill to allow grazing only between November and April, or as otherwise determined appropriate by a qualified biologist, and ongoing monitoring and modifications to grazing regimes.

vii. Annual monitoring surveys shall be conducted for five years after completion of restoration to assess habitat conditions and determine whether populations of Callippe silverspot, Bay checkerspot, or Mission blue butterflies are present and/or reproducing on Icehouse Hill.

MM BIO1h: Large Marble Butterfly Surveys and Habitat Protection. (Required only if the species gains legal protection status). Focused surveys for the large marble butterfly shall be performed by a qualified biologist during the butterfly flight season (March-June) prior to construction, vegetation management, or other ground disturbing activities. Survey findings shall be coordinated with the U.S. Fish and Wildlife Service. The implementation of Mitigation Measures MM BIO-1c (Rare Butterfly Surveys and Habitat Protection at Icehouse Hill) and MM BIO-1g (Rare Butterfly Surveys and Habitat Protection Performance Standards) would be applied to mitigate impacts to the large marble butterfly, which would consist of habitat avoidance and native vegetation plantings to support large marble butterfly populations.

Impact BIO-2: Freshwater Habitat, Tidally Influenced Habitats, Waters of the United States, Waters of the State, and Areas Subject to the Jurisdiction of the State Lands Commission or Bay Conservation Development Commission

Less than Significant with Mitigation Incorporated

The Specific Plan proposes restoration of habitat along the north shore of Brisbane Lagoon and Visitacion Creek, as illustrated in **Figure 3-19** and **Figure 3-22** that would provide in-kind replacement of wetlands and non-wetland waters.[4] Even with in-kind replacement, there would be a temporal loss of wetlands between the time the landfill is capped and before wetland features are recreated. A significant impact would occur.

Specific Plan requirements for physical barriers, such as cyclone fencing or equivalent screening, to be maintained along with educational signage for trails within and adjacent to areas of wetlands and non-wetland waters, would reduce minimize associated with human encroachment. In addition, trails within the wetland portions of Visitacion Creek and Lagoon Park would be provided on raised platforms, resulting in minimal effects on habitat areas. Thus, impacts associated with human encroachment would be less than significant.

Program EIR Mitigation Measures

MM BIO-2a: Avoid or Minimize Adverse Effects on Sensitive Natural Communities and Wetland Areas (Program EIR Mitigation Measure 4.C-2a). The applicant shall avoid or minimize adverse effects on sensitive natural communities and restored wetland mitigation areas. After site grading has concluded, measures shall be implemented to avoid impacts to sensitive natural communities or restored habitat areas, including the installation of silt fencing, straw wattles, or other appropriate erosion and sediment control methods or devices to prevent runoff and construction debris from entering these areas. Such measures shall also be employed where pre-construction grading and post-remediation development requires work adjacent to sensitive natural communities, either prior to or after restoration of those areas occurs. Where construction activities occur in the vicinity of sensitive natural communities on-site, the following shall be implemented to ensure no loss of restored mitigation sites:

- Fencing shall be erected adjacent to the areas where construction is occurring to avoid unintended impacts to sensitive natural areas that occur just outside the construction area and shall be constructed in a manner that will not impede wildlife access to wetland areas.

[4] While the Specific Plan's intention is to enhance Visitacion Creek and along the north shore of the lagoon to replace habitat lost due to site grading and development, resource agencies may not accept enhancement or mitigation actions located within the landfill footprint as mitigation and could require additional off-site mitigation.

Construction workers will be educated about local resources and instructed to avoid sensitive habitats during construction including limiting any human intrusion into natural areas.

- If work in the vicinity of natural communities cannot be avoided, work within these areas shall be conducted during the dry season, typically between May 1 and October 15, and shall occur under permit authority of the California Department of Fish and Wildlife, the Corps of Engineers, and the Regional Water Quality Control Board pursuant to the Clean Water Act Section 404 requirements for avoidance, mitigation and monitoring. Mitigation Measures MM BIO-2b, MM BIO-2c, and MM BIO-2d shall also apply if work cannot be avoided in or directly adjacent to sensitive natural areas or restored habitats.

MM BIO-2b: Maintain Water Quality and Control Erosion and Sedimentation during Construction (Program EIR Mitigation Measure 4.C-2b). The measures described below shall be employed to avoid degradation of natural communities or sensitive natural communities by maintaining water quality and controlling erosion and sedimentation during construction as required by compliance with the National Pollutant Discharge Elimination System (NPDES) General Permit for Construction Activities to address impacts on water quality. In addition, measures shall include, but not be limited to, the following:

- Installing silt fencing between aquatic sensitive natural communities and Project-related activities;
- Locating fueling stations away from potentially jurisdictional areas and features; and
- Isolating construction work areas from any identified jurisdictional features.

MM BIO-2c: Water Quality Protection Measures near Aquatic Sites (Program EIR Mitigation Measure 4.C-1g). Construction and operation of proposed uses and open space areas along Visitacion Creek or adjacent to the northern lagoon edge shall include implementation of erosion control and water pollution control measures consistent with Stormwater Pollution Prevention Program (SWPPP) requirements, and implementation of an ongoing maintenance plan to ensure no reduction in water and environmental quality within the Creek and lagoon.

Project applicants shall provide the City with proof that appropriate stormwater permits have been obtained pursuant to the City of Brisbane's NPDES stormwater discharge permit, the San Francisco Regional MS4 Permit. This shall include construction site inspection and control programs at all construction sites, with follow-up and enforcement consistent with each Permittee's respective

Enforcement Response Plan, to prevent construction site discharges of pollutants and impacts on beneficial uses of receiving waters. The goal of Provision C.3 of the MS4 Permit is for the Permittee, such as the City of Brisbane, to use their planning authorities to include appropriate source control, site design, and stormwater treatment measures in new development and redevelopment projects to address both soluble and insoluble stormwater runoff pollutant discharges and prevent increases in runoff flows from new development and redevelopment projects. This goal is to be accomplished primarily through the implementation of low impact development techniques.

Project applicants shall comply with local municipal requirements and the local stormwater program as mandated under the Municipal Stormwater Permit, including, at minimum, the following measures:

- Plan the development to fit the topography, soils, drainage pattern and natural vegetation of the Baylands.
- Delineate clearing limits, easements, setbacks, sensitive or critical areas, trees, drainage courses, and buffer zones to prevent excessive or unnecessary disturbances and exposure.
- Phase grading operations to reduce disturbed areas and time of exposure.
- Avoid excavation and grading during wet weather.
- Limit on-site construction routes and stabilize construction entrance(s) and exit(s).
- Any increase in impervious surface area shall include establishment of vegetated swales, permeable pavement materials, preserve vegetation, re-plant with native vegetation and appropriate measures should be evaluated and implemented where appropriate.
- Whenever practicable, native vegetation buffer areas shall be provided as part of a project to control pollutants from entering the Bay, and vegetation shall be substituted for rock riprap, concrete, or other hard surface shoreline and bank erosion control methods where appropriate and practicable.
- Construct diversion dikes and drainage swales to channel runoff around the site and away from bodies of water.
- Use berms and drainage ditches to divert runoff around exposed areas.
- Place diversion ditches across the top of cut slopes.
- No use of fertilizers or pesticides.

Applicants shall prepare a maintenance program for approval by the City that includes maintenance of water quality pollution-control features such as swales, sediment traps or other passive applications of pollution-prevention measures required as part of NPDES permitting. The maintenance program shall address the management of open space adjacent to the Brisbane lagoon and Visitacion Creek and, at minimum, shall include the following requirements, to be performed to the satisfaction of the City:

- Identify the entity responsible for ongoing maintenance of the lagoon perimeter and recreational facilities within the perimeter area (e.g., property owners' association, landscape maintenance district), along with provisions permitting the City to enforce maintenance requirements and recoup costs for such enforcement.
- Provide trash receptacles at appropriate locations and regular litter removal.
- Maintain all improvements within the lagoon perimeter in a safe and working condition.
- Identify a funding mechanism to ensure site maintenance and implementation of environmental quality monitoring at the creek and lagoon as part of the open space interpretive center. Monitoring parameters shall include water quality monitoring that, at a minimum, tests the first draw of stormwater from the new rainy season, and may include, but not be limited to vegetation monitoring, and passive observation and recording of fish species present.

MM BIO2d: Compensatory Mitigation, Monitoring, and Reporting for Impacts to Wetlands and Non-Wetland Waters and Sensitive Natural Communities (Program EIR Mitigation Measure 4.C-2c). Where disturbance to sensitive natural communities including jurisdictional wetlands and non-wetland waters cannot be avoided, compensation shall be provided for temporary impacts and permanent loss to ensure that there is no overall loss of sensitive natural communities as a result of Baylands development. Onsite, in-kind replacement of sensitive natural communities including coastal scrub, willow scrub, tidal marsh, freshwater emergent wetlands, and lined manmade drainages that have developed bed and bank characteristics shall be a condition of development. Compensation shall be detailed on an impact-specific basis and shall include development of an onsite Wetland Mitigation and Monitoring Plan, which shall be developed prior to Project Site development or in coordination with permit applications and/or conditions. Alternately, offsite mitigation may be pursued through an approved

mitigation bank, although this option may result in a higher ratio for compensation. At a minimum, such plans shall include:

- Baseline information, including a summary of findings for the most recent wetland delineation conducted at the Project Site;
- Anticipated habitat enhancements to be achieved through compensatory actions, including mitigation site location (onsite enhancement or offsite habitat creation) and hydrology;
- Performance and success criteria for wetland creation or enhancement including, but not limited to, the following:
    - At least 90 percent survival of installed plants for each of the first three years following planting.
    - Performance criteria for vegetation percent cover in Years 1-4 as follows: at least 10 percent cover of installed plants in Year 1; at least 20 percent cover in Year 2; at least 30 percent cover in Year 3; at least 40 percent cover in Year 4; and at least 50 percent cover in Year 5.
    - Performance criteria for hydrology in Years 1-5 as follows: 14 or more consecutive days of flooding, ponding, or a water table 12 inches or less below the soil surface during the growing season at a minimum frequency of three of the five monitoring years; OR establishment of a prevalence of wetland obligate plant species.
    - Invasive plant species that threaten the success of created or enhanced wetlands should not contribute relative cover greater than 35 percent in Year 1, 20 percent in Years 2 and 3, 15 percent in Year 4, and 10 percent in Year 5.
    - If necessary, supplemental water shall be provided by a water truck for the first two years following installation. Any supplemental water must be removed or turned off for a minimum of two consecutive years prior to the end of the monitoring period, and the wetland must meet all other criteria during this period. At the end of the five-year monitoring period, the wetland must be self-sufficient and capable of persistence without supplemental water.
    - At least 75 percent cover by hydrophytic vegetation at the end of the five-year monitoring period. In addition, wetland hydrology and hydric soils must be present and defined as follows:
        - *Hydrophytic vegetation* – A plant community occurring in areas where the frequency and duration of inundation or soil

saturation produce permanently or periodically saturated soils of sufficient duration to exert a controlling influence on the plant species present.

- *Wetland hydrology* – Identified by indicators such as sediment deposits, water stains on vegetation, and oxidized rhizospheres along living roots in the upper 12 inches of the soil, or satisfaction of the hydrology performance criteria listed above.

- *Hydric soils* – Soils that are saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions, which are often characterized by features such as redox concentrations, which form by the reduction, translocation, and/or oxidation of iron and manganese oxides. Hydric soils may lack hydric indicators for a number of reasons. In such cases, the same standard used to determine wetland hydrology when indicators are lacking can be used.

- Five years after any wetland creation, a wetland delineation shall be performed to determine whether created wetlands are developing according to the success criteria outlined in the project permits. If they are not, remedial measures such as re-planting and or re-design and construction of the created wetland shall be taken to ensure that the Project's mitigation obligations are met.

- Monitoring and reporting requirements. If permanent and temporary impacts on jurisdictional waters cannot be compensated onsite through the restoration or enhancement of wetland features incorporated within proposed open space areas, the specific project applicant shall provide additional compensatory mitigation for these habitat losses. Potential options include the creation of additional wetland acreage onsite, the purchase of mitigation bank credits, or the purchase, implementation, and maintenance in perpetuity of offsite mitigation as approved by the City and state and federal permitting agencies. Offsite compensatory mitigation would be required to fulfill the performance standards described above.

Additional Mitigation Measures

MM BIO-2e: Design and Reporting Performance Standards for Sensitive Natural Community Restoration Areas. The wetland mitigation and monitoring plan described in Mitigation Measures MM BIO-2d shall additionally include design-level plans detailing the restoration of Visitacion Creek and the north shore of

Brisbane Lagoon. The plan shall also include long-term monitoring requirements. Additional elements to include in the plan are as follows:

- The location of restored/enhanced habitats that provide at least a 1:1 in-kind replacement ratio by acreage and habitat type.
- An assessment of existing and proposed wetland and non-wetland waters habitat functions and values, including a discussion of sensitive habitats, soils, hydrology, and existing or potential sensitive species that are or would be supported by existing or proposed habitats demonstrating no net loss of habitat functions and values.
- Planting specifications for habitat areas (e.g., tidal, intertidal, and freshwater marsh).
- A strategy for invasive species management in mitigation areas.
- Location and design of recreational improvements, including buffer areas required to protect mitigation areas from encroachment by visitors or pets, including specific planting/management plan.
- Site monitoring and management responsibilities to be carried out over a minimum of 5 years based on identified performance standards and success criteria.
- Contingency measures, including the need for additional planting, watering, and/or maintenance, and an extension of monitoring requirements if standards are not met within the initial 5-year performance period.

MM BIO-2f: Performance Standards to Minimize Temporal Habitat Losses. To facilitate natural revegetation near restored aquatic sites, final grading for Visitacion Creek and Lagoon Park shall be completed within 2 years of initial site disturbance, or as otherwise determined by the city.

Impact BIO-3: Fish and Wildlife Movement

Less than Significant with Mitigation Incorporated

There is limited potential for terrestrial wildlife movement through the Baylands Specific Plan area given the area's existing physical barriers to wildlife movement including major roads and highways, industry, railroad tracks, pipelines, and fences. However, wildlife would move along Visitacion Creek and within the freshwater marshes in the western portion of the site. Maintaining and enhancing this movement would be ensured through development and implementation of a Project-wide Open Space Plan (Mitigation Measure MM BIO-3a), Marsh Wildlife and Habitat Protection Plan (Mitigation Measure MM BIO-3b), and a pet safe policy

that would apply during construction and operations (Mitigation Measure MM BIO-3c). Habitat enhancements proposed for Icehouse Hill along with recreational improvements consistent with Mitigation Measure MM BIO-1c would also provide for movement of butterflies between Icehouse Hill and the San Bruno Mountain Conservation Area.

Development of commercial and residential buildings, as well as additional night lighting, would increase bird strike hazards to avian movement through the Baylands. This is a significant impact.

Mitigation Measures MM-BIO-3a and MM-BIO-3b provide long-term open space planning and marsh protection planning for the Baylands. In addition, Mitigation Measure MM BIO-3c would establish a wildlife-safe pet policy that would apply during construction and operations to minimize impacts of pets on habitat areas.

Implementation of Mitigation Measures MM BIO-1a through MM BIO-1c would be reduce impacts to butterfly movement to less than significant, and in the long-term, restoration on Icehouse Hill would improve habitat for the Callippe silverspot butterfly and perhaps other listed butterfly species by providing a link to restored habitat in the Baylands (e.g., Icehouse Hill) and sensitive species resources on San Bruno Mountain.

Mitigation Measures MM BIO-3e and MM BIO-3f provide design requirements that would provide effective bird-safe building treatments to buildings to avoid or reduce bird mortality. Impacts would therefore be less than significant with mitigation incorporated. Mitigation Measures MM BIO-3d and AES-4 address the potential for nighttime lighting of buildings, which would reduce the potential for nighttime bird collisions. Thus, Impact BIO-3 would be less than significant with mitigation incorporated.

Program EIR Mitigation Measures

MM BIO-3a: Wildlife-Safe Pet Policy during Construction and Operations (Program EIR Mitigation Measure 4.C-4a). All development on the Baylands shall be required to have a no-pets policy for construction workers. All development within the Baylands that includes a residential component shall also include a pet policy that requires residents to adhere to the measures of this policy to prevent impacts on wildlife from domestic animals. The policy shall become a part of the Covenants, Conditions, and Restrictions (CC&Rs) attached to each property deed for for-sale residential properties and enforced through the homeowner's association or other entity specified in the CC&Rs and made part of leases for residential rental properties and commercial leases within the Baylands. The pet policy shall limit the number of animals per residence and require adult cats, dogs, and rabbits to be spayed or neutered. Cats and dogs shall be required to be kept inside the residences and allowed outside residences only if on a leash and under the tenant's control and supervision, except within areas specifically

designed as dog parks. To provide effective predator control, feral animal trapping may be necessary.

MM BIO-3b: Use of Wildlife-Friendly Lighting (Program EIR Mitigation Measure 4.C-4d). During design of any building greater than 100 feet tall, the applicant and architect shall consult with a qualified biologist experienced in building/lighting design issues (as approved by the City of Brisbane Planning Department) to identify lighting related measures to minimize the effects of the building's lighting on birds. Such measures, which may include the following and/or other measures, shall be incorporated into the building's design and operation.

- Use strobe or flashing lights in place of continuously burning lights for obstruction lighting. Use flashing white lights rather than continuous light, red light, or rotating beams.
- Install shields onto light sources not necessary for air traffic to direct light towards the ground.
- Extinguish all exterior lighting (i.e., rooftop floods, perimeter spots) not required for public safety.
- When interior or exterior lights must be left on at night, the operator of the buildings shall examine and adopt alternatives to bright, all-night, floor-wide lighting, which may include:
    - Installing motion-sensitive lighting.
    - Using desk lamps and task lighting.
    - Reprogramming timers.
    - Use of lower-intensity lighting.
    - Windows or window treatments that reduce transmission of light out of the building will be implemented to the extent feasible.
    - Educational materials will be provided to building occupants encouraging them to minimize light transmission from windows, especially during peak spring and fall migratory periods, by turning off unnecessary lighting and/or closing drapes and blinds at night.
    - A report of the lighting alternatives considered and adopted shall be provided to the City of Brisbane Planning Department for review and approval prior to construction.
    - The City of Brisbane Planning Department shall ensure that lighting-related measures to reduce the risk of bird collisions have been

incorporated into the design of such buildings to the extent practicable.

MM BIO-3c: Bird-Safe Building Design (Program EIR Mitigation Measure 4.C-4e). During design of any building greater than 100 feet tall, the applicant and architect shall consult with a qualified biologist experienced with urban building bird strikes design issues (as approved by the City of Brisbane Planning Department) to identify measures related to the external appearance of the building to minimize the risk of bird strikes. Such measures, which may include the following and/or other measures, shall be incorporated into the building's design:

- Use non-reflective tinted glass.
- Use window films to make windows visible to birds from the outside.
- Use external surfaces/designs that break up reflective surfaces.
- Place bird attractants, such as bird feeders and baths, at least three feet and preferably 30 feet or more from windows in order to reduce collision mortality.
- A report of the design measures considered and adopted shall be provided to the City of Brisbane Planning Department for review and approval prior to construction. The City of Brisbane Planning Department shall ensure that building design related measures to reduce the risk of bird collisions have been incorporated to the extent practicable.

Additional Mitigation Measures

MM BIO--3d: Additional Bird-Safe Building Design Requirements. All buildings shall be constructed to achieve a performance standard of a Threat Factor of 30 or less on each façade up to 100 feet above grade (American Bird Conservancy, no date).[5] The following requirements shall apply to meet this performance standard for the portions of all buildings up to 100 feet in height above grade, other than the Roundhouse, which is exempt from this requirement due to its historic character, need to maintain historic façade materials, and lack of reflective surfaces.

- No more than 5 percent of any building façade up to 40 feet above grade, as well as 24 feet above any green roof, shall exceed a Threat Factor of 30.

[5] "Threat Factor" is defined by the American Bird Conservancy as a relative measure of a building material's visibility, which enables the bird to see and avoid the building surface and, as a result, reduce bird collisions. A Threat Factor of 30 suggests that bird collisions would be reduced by least 50 percent. Lower Threat Factors would reduce bird collisions by greater amounts. The American Bird Conservancy's inventory of estimated threat factors for building façades can be found at https://abcbirds.org/glass-collisions/products-database/.

- The exterior wall envelope and any exterior fenestration on the portion of buildings between 41 feet and 100 feet above grade shall be constructed with bird friendly materials and shall not exceed a Threat Factor of 30 on any given façade. Other materials may be used to the extent they do not exceed an aggregate of 10 square feet within any 10-by-10-foot-square area of exterior wall below 100 feet above grade.
- No glazed corners or fly-through conditions shall exceed a Threat Factor of 30.
- For Threat Factors equal to or less than 30, the building shall be exempt from the building façade requirements.

During design of any building, the Project or Permit Applicant shall engage a qualified biologist (as approved by the City of Brisbane Planning Department) who is experienced with urban bird-safe building design methods to identify and approve building design treatments/elements that reflect the most current practice in bird strike protection for those portions of buildings up to 100 feet in height above grade and achieve the performance standards described above. Building designs shall also be approved by the City of Brisbane Building Department.

Building design treatments/elements that must be reviewed and incorporated into the building design to the extent needed to achieve the identified performance standard of a Threat Level of 30 or less may include, but are not necessarily limited to, the following:

- *Glazing Treatments:* Glazing treatments shall be used to create a transparent (rather than reflective) surface that is visible to birds. Examples of bird-friendly glazing treatments include, but are not necessarily limited to, the following:
    - Use of glass or a glass coating that reflects ultraviolet light
    - Use of dichroic or translucent glass; dichroic glass achieves the appearance of changing colors by transmitting and reflecting light, while translucent glass is porous and opaque
    - Use of fritted or frosted glass or angled glass
    - Use of panned glass with fenestration patterns
    - Use of non-reflective, tinted glass
    - Art treatment of glass

- *Building and Fenestration Strategies (Architectural Features):* Architectural features shall be used to block the uninterrupted view of glass from birds and/or to provide a physical obstacle to bird strikes. Examples of building and fenestration strategies that would reduce the potential for bird-strikes include, but are not necessarily limited to, the following:
    - Use of architectural features that block the view of glass from birds, including screens, overhangs, louvers, and awnings
    - Use of netting that is stretched several inches over windows or entry ways to prevent birds from hitting the glass
    - Use of external surfaces/designs that break up reflective surfaces (e.g., well-articulated building facades and/or fenestration broken up with mullions or other treatments)
    - Avoid the use of transparent building corners
- *Design and Operation of Nighttime Lighting:* Each site-specific development project shall comply with Threshold AES-4 and Mitigation Measure MM AES-4, which provide night sky performance standards (e.g., light trespass restrictions). Examples of nighttime lighting design and operation that would comply with Threshold AES-4 and Mitigation Measure AES-4 and reduce the potential for bird-strikes caused by light trespass, over-illumination, light clutter, or skyglow include, but are not necessarily limited to, the following:
    - Low profile, low intensity lighting directed downward
    - Shielded fixtures for outdoor lighting
    - Motion sensor lighting and automatic shut offs for interior lights in unoccupied spaces
    - Interior blinds that automatically close at night to block light transmission
    - Motion sensor lighting and automatic shut offs for exterior lights where not required for public safety
    - Minimize vanity lighting
    - Strobe or flashing lights in place of continuously burning lights for obstruction lighting. Use flashing white lights rather than continuous light, red light, or rotating beams.
    - Outdoor lighting and colors of lighting that would increase the visibility of buildings to birds without substantially increasing energy consumption or decreasing public safety.

Impact BIO-4: Brisbane Tree Ordinance

Less than Significant

Specific Plan development would result in the removal of nearly all trees within the Baylands. The Program EIR (Impact 4.C-5) found that site development would result in the removal of protected trees. In its analysis, the Program EIR concluded that reliance upon the City's tree ordinance, which requires a permit for tree removal and tree replacement at a minimum ratio of 1:1, would result in a less than significant impact with no mitigation required. Relocation of the City's existing fire station would also require removal of some existing trees at the relocation site. Such removed trees would be replaced at a 1:1 ratio to the extent possible given operational requirements for the relocated fire station.

Impact BIO-5: San Bruno Mountain Habitat Conservation Plan

Less than Significant with Mitigation Incorporated

Restoration of Icehouse Hill would promote the goals of the Habitat Conservation Plan to conserve and restore listed butterflies by restoring Icehouse Hill in a manner that supports native plants, and particularly host and nectar plants for listed butterfly species. Specific Plan implementation, in combination with Mitigation Measure BIO-1c would not conflict with the provisions of the San Bruno Mountain Habitat Conservation Plan and would likely result in a potentially beneficial impact on achieving the Habitat Conservation Plan's goals relative to listed butterfly species.

The Specific Plan would relocate Mission Blue Nursery to Icehouse Hill. Should there be a delay between the time the nursery would need to vacate its existing site and the time the new site on Icehouse Hill would be operational, this delay could lead to a temporary disruption in the nursery's ability to continue providing native plants for ecological restoration projects within the Habitat Conservation Plan area, which would hinder the mission of the conservation plan. Mitigation is provided to ensure that the Nursery is not required to vacate its existing facility until the relocation site on Icehouse Hill is ready to commence operation.

Mitigation Measures

MM BIO-5: **Relocation of Misson Blue Nursery.** The relocation of Mission Blue Nursery to its new location on Icehouse Hill shall be undertaken such that the Nursery is not required to vacate its existing facility until the relocation site on Icehouse Hill is ready to commence operation.

e. Cultural Resources and Tribal Cultural Resources

Impact CUL-1: Substantial Adverse Change in the Significance of a Historic Building or Structure

Less than Significant with Mitigation Incorporated

The Specific Plan provides a five-stage plan for restoration and adaptive reuse of the historic Roundhouse, implementation of which would comply with the Secretary of the Interior's Standards for Rehabilitation. While the Roundhouse restoration plan recommends initial safety measures, including fencing the site, installing security measures to prevent unwanted access, mitigating imminent hazards, and removal of pests and plants, be initiated prior to Specific Plan approval, should these measures not be undertaken, continued deterioration of the historic Roundhouse structure would occur inconsistent with the General Plan and Program EIR mitigation measures. In addition, damage to the Roundhouse that might occur during this process could adversely affect the building's historic integrity. Finally, introduction of visually incompatible construction immediately adjacent to the building could result in a loss of integrity impacting the historic significance of the building. A significant impact requiring mitigation would thus result.

Baylands development would not have a direct or indirect impact on the Machinery & Equipment Building or the Bayshore/Crocker Tunnel as historical resources. Mitigation Measure MM CUL-1a would prevent continuing deterioration of the Roundhouse consistent with Program EIR mitigation measures adopted for the Baylands. Mitigation Measure MM CUL-1b provides a protocol for addressing any damage that may occur to the Roundhouse during restoration activities.

Program EIR Mitigation Measures

MM CUL-1a: Design Guidelines (Program EIR Mitigation Measure 4.D-1b). All Baylands development within 50 feet of the Roundhouse or the Machinery & Equipment building shall be designed to ensure their architectural compatibility with the historic Roundhouse, and to ensure that new buildings do not overwhelm or unnecessarily contrast with these historic buildings. To this end, the reconstructed Roundhouse shall be located no closer than 30 feet from the park boundary, and all development projects shall incorporate a minimum 50-foot structural setback and appropriate heights, volumes, and materials for any proposed new buildings in the immediate vicinity to ensure compatibility with the Roundhouse building. Appropriate heights of new construction adjacent to the Roundhouse would be the same as (about 25 feet), or slightly greater than (i.e., up to 15 feet greater than), the existing height of the building. Appropriate materials for new construction in the immediate vicinity of either building would

be brick cladding. Appropriate volumes for new development that would face the Roundhouse should mirror the curve of the existing structure.

All non-residential development projects within 50 feet of the Roundhouse building shall be subject to City design permit review and approval prior to development to ensure consistency with the guidelines.

Additional Mitigation Measures

MM CUL-1b: Timing for Implementation of Initial Safety and Stabilization Measures. The initial Safety and Security Phase measures outlined in the Baylands Roundhouse Stabilization and Restoration Plan shall be undertaken and completed within three months of Specific Plan approval. Initial Stabilization Phase measures, including "mothballing"[6] of the Roundhouse to prevent further damage and deterioration, shall be undertaken no later than six months following completion of Safety and Security Phase measures outlined in the Baylands Roundhouse Stabilization and Restoration Plan (Draft EIR Appendix E.2).

MM CUL-1c: Protocols to Address Potential Damage to the Roundhouse during its Stabilization and Restoration. In the event the Roundhouse building is damaged during any phase of implementing the Stabilization and Restoration Plan, all work shall be halted immediately, and the damage shall be assessed by a historic preservation professional who meets or exceeds the Secretary of the Interior's Professional Qualification Standards for architectural history. This professional shall review the damage and make recommendations for the continuation of Roundhouse stabilization and restoration. Such recommendations shall be submitted to the Brisbane Community Development Director for review and approval. The historic preservation professional's recommendations, as approved by the Community Development Director, shall then be implemented.

Impact CUL-2: Substantial Adverse Change in the Significance of an Archaeological Resource

Less than Significant with Mitigation Incorporated

The Baylands Specific Plan area and surrounding areas have a high sensitivity for buried pre-contact cultural deposits in native soils and a high sensitivity for surficial or shallow historic-era cultural deposits, particularly west of the Caltrain ROW. Pre-contact sensitivity at the surface is also high along the northern and eastern edge of the Specific Plan area, which was on the edge

[6] Mothballing is proposed in the Roundhouse restoration and reuse plan as part of initial stabilization and will include protecting the structure from further moisture penetration, plant and pest infestation, and stabilizing the structural components against some magnitude of wind and seismic forces.

of the marshland prior to the placement of artificial fill. Thus, excavations into native soils beneath the artificial fill within the Specific Plan have the potential to disturb buried resources. Should excavations for Baylands development extend into native soils, significant impacts to archaeological historical resources could result. Mitigation measures require that, prior to Project construction, an Archaeological Testing Plan be established to clarify the depth of fill and the sensitivity of the construction site for archaeological resources, and to determine if P-38-005131 has a subsurface component within that site. Mitigation measures have also been included that require a cultural resources awareness training be provided for all construction personnel involved in ground-disturbing work and that archaeological monitoring be conducted in all areas identified as sensitive as a result of the archaeological testing.

Program EIR Mitigation Measures

MM CUL-2a: Inadvertent Discovery of Cultural Resources (Program EIR Mitigation Measure 4.D-2). If any previously unidentified archaeological resources are discovered during ground-disturbing activities associated with development on the Baylands, all work within 100 feet of the resources shall be halted. The City, in consultation with a City-approved qualified consulting archaeologist, shall assess the significance of the find according to CEQA Guidelines Section 15064.5. Prehistoric materials subject to this measure might include obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or toolmaking debris; culturally darkened soil ("midden") containing heat-affected rocks, artifacts, or shellfish remains; stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs); and battered stone tools, such as hammerstones and pitted stones. Historic-era materials subject to this measure might include in-situ (in place) stone, concrete, or adobe footings and walls; filled wells or privies; and in-situ deposits of metal, glass, and/or ceramic refuse.

If any find is determined to be a historical resource or a unique archaeological resource, the City and the consulting archaeologist shall meet to determine the appropriate avoidance measures or other appropriate mitigation. The City shall make the final determination. All archaeological resources recovered shall be subject to scientific analysis, professional museum curation, and documentation according to current professional standards.

Preservation in place, i.e., avoidance, is the preferred method of mitigation for impacts to cultural resources and shall be required unless there are other equally effective methods. Preservation in place would include planning construction to avoid archaeological sites; deeding archaeological sites into a conservation easement, park, or green space; or capping/covering archaeological sites with a layer of soil before building. Other methods to be considered shall include archeological testing, archeological monitoring, and/or an archeological data

recovery program that would include sample excavation, artifact collection, site documentation, and historical research. All archaeological work shall be completed in accordance with an Archaeological Resources Treatment Plan prepared by the City-approved qualifying archaeological consultant. Work may commence upon completion of treatment, as approved by the City.

Additional Mitigation Measures

MM CUL-2b: Cultural Resources Awareness Training. Before any ground-disturbing and/or construction activities other than installation of pile foundations that might disturb native soils beneath the artificial fill within the Baylands, an archaeologist that meets or is under the supervision of an archaeologist that meets the Secretary of the Interior's Professional Qualifications Standards (SOI PQS) for Archeology shall conduct a training program for all construction and field personnel involved in Specific Plan-related ground disturbance prior to such personnel conducting any on-site activities. The training shall outline the general archaeological sensitivity of the area and the procedures to follow if an archaeological resource and/or human remains are inadvertently discovered during Specific Plan-related activities, specifically, procedures developed pursuant to MM CUL-2d below. The training may be in the form of an in-person meeting, recorded presentation, or a combination of the two.

MM CUL-2c: Archaeological Testing, Evaluation, and Treatment. For all ground-disturbing activities requiring a grading permit or infrastructure construction plan under the Specific Plan that may disturb native soils, such as grading, excavation for below-grade parking structures, and utility trenching, the Project or Permit applicant shall retain a Secretary of the Interior-qualified archaeologist to prepare an Archaeological Impact Assessment to determine if archaeological testing is needed to determine the depth of fill and/or archaeological sensitivity of the permitted work area.

This Archaeological Impact Assessment of the proposed work will be conducted based on, at minimum, the 30% design plans for the work activity and must be completed before the grading permit or infrastructure construction plan is approved. Previous geotechnical studies, other information about the history of the Baylands, as well as any future subsurface reports, can be used to determine if there is sufficient information to determine the potential for the activity to impact archaeological resources and determine if additional subsurface work is needed. The Archaeological Impact Assessment will be presented to the City of Brisbane Director of the Community Development Department, or the Director's designee, and will include a determination as to if archaeological testing or other cultural resources mitigation specific to the site assessed is needed. The

Archaeological Impact Assessment will also be submitted to the Northwest Information Center.

- If the retained archaeologist determines that the proposed work may impact intact soils, subsurface testing must be completed to the extent possible prior to the issuance of grading permit or infrastructure construction plan. All testing, evaluation, monitoring, and treatment (as warranted) shall be completed by a Secretary of the Interior-qualified archaeologist. A Native American representative registered with the Native American Heritage Commission that is traditionally and culturally affiliated with the geographic area as described in Public Resources Code Section 21080.3 will be offered the opportunity to collaborate with the archaeologist in the testing, evaluation, and treatment.
- Testing shall be completed according to an established *Archaeological Testing Plan*, which will be prepared and submitted to the Director of the City of Brisbane Community Development Department, or the Director's designee, for review and approval. The *Archaeological Testing Plan* shall include, at a minimum, the identification of the property types of the expected archaeological resource(s) that could be affected by the to-be-permitted ground-disturbing activity; testing methods to be used (hand excavation, coring, and/or mechanical trenching); and the locations recommended for testing. The purpose of testing shall be to determine the presence or absence of archaeological resources and completed as feasible, determined by the Secretary of the Interior-qualified archaeologist.
- As part of the *Archaeological Testing Plan*, a Health and Safety Plan (HASP) will be prepared by the qualified archaeologist in consultation with the project proponent or permittee. The qualified archaeologist leading the archaeological testing effort shall be Hazardous Waste Operations and Emergency Response-certified, if required, and will be responsible for implementing the HASP, including distributing the plan to field personnel and conducting a safety meeting prior to the commencement of field studies, to protect construction workers, the public, and the environment. All personnel on site will be required to follow the protocol detailed in the HASP.
- Following testing, archaeological monitoring during construction may be recommended by the archaeologist, if deemed necessary. Archaeological monitoring shall be conducted according to an established *Archaeological Monitoring Plan*, which will be prepared and submitted to the Director of

the City of Brisbane Community Development Department, or the Director's designee, for review and approval. The Archaeological Monitoring Plan shall include, at a minimum, where monitoring will be completed and under what circumstances based on soil types, geology, distance to known sites, and other factors; person(s) responsible for conducting monitoring activities, including an archaeological monitor and a tribal monitor; schedule for submittal of monitoring logs/reports; and protocol for notifications in case of encountering cultural resources, as well as methods of dealing with the encountered resources. During the course of the monitoring, the archaeological monitor and tribal monitor may adjust the frequency—from continuous to intermittent—of the monitoring based on the conditions and professional judgment regarding the potential to impact resources.

- If any archaeological resources are encountered during testing and/or monitoring, the Project or Permit Applicant shall ensure that all resources are evaluated by a Secretary of the Interior-qualified archaeologist based on California Register of Historical Resources criteria and consistent with the approved plans. If the resource is determined to be significant by the City of Brisbane, in consultation with the Secretary of the Interior-qualified archaeologist, and, if applicable, the tribal monitor, the Project or Permit Applicant, in consultation with the Director of the City of Brisbane Community Development Department, or the Director's designee shall determine whether preservation in place is feasible. Consistent with Public Resources Code section 21083.2(b) and CEQA Guidelines Section 15126.4(b)(3), this may be accomplished through planning construction to avoid the resource; incorporating the resource within open space; or capping and covering the resource.
- If a significant archaeological resource(s) is in the Project Area, and cannot be avoided, the Project or Permit Applicant, a Secretary of the Interior-qualified archaeologist, the Director of the City of Brisbane Community Development Department, or the Director's designee, and a Native American representative registered with the Native American Heritage Commission that is traditionally and culturally affiliated with the geographic area as described in Public Resources Code Section 21080.3 shall determine treatment measures to minimize or mitigate any potential impacts to the resource pursuant to PRC Section 21083.2 and CEQA Guidelines Section 15126.4. This shall include documentation of the resource and may include data recovery, if deemed appropriate by the City of Brisbane, in consultation with the Secretary of the Interior-qualified archaeologist, and, if applicable, the tribal monitor, or other

actions such as treating the resource with culturally appropriate dignity and protecting the cultural character and integrity of the resource.

- If deemed appropriate, data recovery shall be completed according to an established *Archaeological Resources Treatment Plan*, which will be prepared and submitted to the Director of the City of Brisbane Community Development Department, or the Director's designee, for review and approval. The *Archaeological Resources Treatment Plan* shall include, at a minimum, the scope of work; the environmental setting; research questions and goals; a detailed field strategy to address research goals; analytical methods; disposition of artifacts; security approaches and protocols; and reporting requirements. Data recovery may include, but is not limited to, backhoe trenching, shovel test units, hand auguring, and hand excavation.
- Components of the *Archaeological Testing Plan*, *Archaeological Monitoring Plan*, and *Archaeological Resources Treatment Plan* may be combined, as deemed appropriate by the Secretary of the Interior-qualified archaeologist. All documentation shall be submitted to the Northwest Information Center, the Native American Heritage Commission Sacred Land Files, and the Director of the Community Development Department or the Director's designee.

MM-CUL-2d: Site-Specific Mitigation for P-38-005131. For each Archaeological Impact Assessment completed for MM-CR-3, Archaeological Testing, Evaluation, and Treatment, the Secretary of Interior-qualified archaeologist shall determine if intact deposits associated with P-38-005131 may be impacted within the permitted work area. This assessment will be included in the Archaeological Impact Assessment.

Impact CUL-3: Substantial Adverse Change in the Significance of a Tribal Cultural Resource

No Impact

Six Tribal nations were offered the opportunity for consultation regarding the potential presence of Tribal Cultural Resources within the Baylands and appropriate mitigation for any resources that might be present. No Tribes responded and thus no potential Tribal Cultural Resources were identified.

Impact CUL-4: Disturb Human Remains

Less than Significant

Specific Plan development would comply with Health and Safety Code Section 7050.5 and 7052.5 and Public Resources Code Section 5097.98, which would protect any previously unidentified human remains, including those interred outside of formal cemeteries.

f. Transportation

Impact TRA-1: Vehicle Miles Traveled

Less than Significant – Construction

Although Baylands construction activities would generate vehicle miles traveled, such travel would be temporary and not of a scale that would change regional VMT characteristics. Construction activities within public rights-of-way would be subject to Brisbane's, South San Francisco's, Daly City's, and Caltrans' encroachment permit requirements within their respective rights-of-way. Consequently, any work in public rights of way would reduce roadway disruptions, provide for safe travel, and require compliance with the Manual on Uniform Traffic Control Devices (MUTCD). Construction activities would maintain two-way traffic on all two-way streets at all times; however, flaggers with radios would be positioned at each end of a one-lane construction detour, if needed at times, to maintain two-way traffic. Consequently, work in public rights-of-way would not cause roadway disruptions to a degree that would substantially increase vehicle miles travelled.

Less than Significant – Operations

Per capita VMT by Baylands residents and employees would be more than 30 percent below the existing regional baseline VMT for both Baylands residents and employees (see **Table 4.8-10**). As indicated in **Table 4.8-12**, Baylands development would result in an 80,000-mile daily decrease in regional (nine-County Bay Area) VMT under cumulative Year 2040 conditions (105,000 miles with construction of Candlestick interchange improvements).

Impact TRA-2: Facilitate Transit, Bicycle, and Pedestrian Travel Modes

Less than Significant with Mitigation Incorporated

While the Specific Plan proposes a comprehensive internal bicycle and pedestrian system, it also includes several inadequate connections to offsite facilities which would require vehicular travel for trips that might otherwise be made by bicycle or walking. In addition, the proposed 4-lane roadway cross-section for the Geneva Avenue bridge would eliminate proposed dedicated bus rapid transit lanes on the bridge and require rapid transit buses to merge with vehicular traffic when crossing the bridge, which would discourage use of transit and slow emergency

response across the bridge. Relocation of Fire Station No. 81 would preclude use of the existing pedestrian crosswalk and bus stop.

Mitigation Measures are proposed to eliminate inadequate bicycle and pedestrian connections and require a 6-lane bridge section that would accommodate bus rapid transit and minimize the potential for traffic safety conflicts at its western end. Mitigation Measures also require the continued availability of a bus stop and crosswalk adjacent to the relocated fire station during and after construction, along with safe ingress and egress of fire apparatus as well as safe traffic, bus, and pedestrian movement.

Program EIR Mitigation Measures

No Program EIR Mitigation Measures are being carried forward.

Additional Mitigation Measures

MM TRA-2a: Eliminate Inadequate Pedestrian and Bicycle Connections. Prior to or concurrent with approval of the Baylands Specific Plan, the following modifications shall be made to the Baylands Specific Plan to ensure provision of adequate pedestrian and bicycle connections and provide continuous bus rapid transit lanes across the Geneva Avenue extension:

- Sidewalks shall be provided on the east side of Bayshore Boulevard along the Specific Plan frontage consistent with the Bayshore Mobility Plan as approved by the Brisbane City Engineer.
- Connections between the portions of the Bay Trail to be provided within the Baylands and the existing Bay Trail segments north of the Baylands shall be designed and constructed to be ADA compliant as approved by the Brisbane City Engineer.
- Provide off-site improvements shown on **Figure 4.8-8** to provide a safe and accessible pedestrian and bicycle network to local and regional destinations to ensure that the project does not create a situation where there is inadequate mixing for people walking or bicycling with vehicles to off-site destinations.
- The Bay Trail shall be connected through a protected path of travel along Sierra Point Parkway (either a two-way shared use pathway or protected Class IV bicycle facilities if the right-of-way for a shared use path to Bay Trail standards is infeasible), connecting to the proposed Bay Trail extension on the north side of Sierra Point Parkway at Marina Boulevard. Similar improvements shall be provided on the northern end of the Bay Trail within the Baylands.

- Off-site improvements shall comply with the Supplemental Design Guidelines presented in Appendix E to EIR Appendix F.1 and shall be constructed in coordination with the on-site facilities that these are connecting.

MM TRA-2b: Provide for Continuous Bus Rapid Transit Lanes along the Geneva Avenue Extension through the Baylands. A six-lane roadway section shall be provided along the Geneva Avenue extension, including the bridge over the Caltrain right-of-way consisting of two vehicular travel lanes and one bus rapid transit lane in each direction. The roadway cross-section for the Geneva Avenue extension shall be consistent with the approved 2013 Project Study Report or as approved by the Brisbane City Engineer.

MM TRA-2c: Improvements within the Roadway Right-of-Way at 140 Valley Drive. Relocation and reconstruction of existing facilities in the public right of way and/or placement of new facilities (including but not limited to traffic control devices to ensure safe ingress and egress of fire apparatus) shall be determined by and constructed as approved by the City Engineer.

Impact TRA-3: Hazards to Vehicles, Bicyclists, or Pedestrians

Less than Significant with Mitigation Incorporated

Specific Plan development would conform to the requirements of the City's encroachment permit process and the California Manual on Uniform Traffic Control Devices regulations, which establish traffic operations and management rules during construction for working safely and causing the least possible interference with people walking, bicycling, driving, or taking transit near the construction area.

A significant impact would result due to:

- Closely spaced intersections along Bayshore Boulevard at Industrial Way and Main Street, as well as along Main Street at Industrial Way.
- An inadequate 4-lane cross-section proposed for the Geneva Avenue bridge.
- Roadway cross-sections for Roundhouse Circle, East Park Boulevard, and West Park Boulevard that do not meet City standards for fire access.
- A substantial increase in students walking or bicycling on a daily basis along Geneva Avenue and Bayshore Boulevard, both of which are identified by San Mateo County as High Injury Network roadways. Students would also travel along a 500-foot section of Main Street without sidewalks.

- Potential for vehicle queueing at the Baylands middle school picking up and dropping off students to conflict with and create hazards for safe vehicular, bicycle, and pedestrian travel.
- Queues of vehicles from Baylands and cumulative development waiting to exit the freeway at southbound US 101 freeway offramps routinely extending back onto the U.S. 101 mainline.

Implementation of Mitigation Measures MM TRA-3a through MM TRA-3o, including the improvements summarized in **Figure 4.8-11a** through **Figure 4.8-11c**, along with implementation of the Bayshore Mobility Plan described in Section 3.3 and the Safe Routes to School Program described in Section 3.4 would ensure that Specific Plan development would adhere to applicable design standards and minimize Specific Plan-related transportation hazards.

Compliance with Brisbane's design standards and Baylands Supplemental Roadway Design Guidelines presented in Appendix F.1 would ensure that new facilities meet relevant standards and support the provision of adequate sight lines, protection for roadway users, and accommodation of loading activities.

Program EIR Mitigation Measures

MM TRA-3a: Construction Management Plans (Program EIR Mitigation Measure 4.N-12). In conjunction with all construction permits, site-specific development and infrastructure projects subject to City of Brisbane approval shall develop, submit for City review and approval, and implement Construction Management Plans that specify measures that would reduce impacts on motor vehicle, bicycle, pedestrian, and transit circulation. The Construction Management Plans shall include but not necessarily be limited to the following:

- Location of construction staging areas for materials, equipment, and vehicles.
- Notification procedures for adjacent property owners and public safety personnel regarding when major deliveries, detours, and lane closures will occur.
- Identification of haul routes for movement of construction vehicles that would minimize impacts on vehicular and pedestrian traffic, circulation, and safety; and provision for monitoring surface streets used for haul routes so that any damage and debris attributable to the haul trucks can be identified and corrected by the project applicant.
- Provisions for removal of trash generated by construction activity.

- A process for responding to, and tracking, complaints pertaining to construction activity, including identification of an on-site complaint manager.

MM TRA-3b: Closely Spaced Intersections on Geneva Avenue (Program EIR Mitigation Measure 4.N-1g). Approval of any tentative map providing for spacing of less than 1,200 feet between full-access intersections along the Geneva Avenue extension shall require that the interactions of green and red signal timing at any one intersection along the Geneva Avenue extension shall not affect operations at any other intersection along the extension, by backing traffic waiting for a green signal at one intersection along the Geneva Avenue extension into another intersection along the extension. Should full-access intersections along the Geneva Avenue extension with spacing of less than 1,200 feet be proposed, a microsimulation of all proposed intersections along the extension (e.g., Synchro, VISSUM) shall be undertaken to analyze interactions of green and red signal timing and demonstrate that operations at any one intersection along the Geneva Avenue extension would not affect operations at any other intersection along the extension.

MM TRA-3c: Loading Areas (Program EIR Mitigation Measure 4.N-17). Each site-specific development and infrastructure projects shall provide sufficient loading and unloading areas in appropriate locations such that loading and unloading activities, including vehicle queuing, will not block roadway or on-site parking area travel lanes, or bicycle or pedestrian facilities.

Additional Mitigation Measures

MM TRA-3d: City Design Standards and Supplemental Roadway Design Guidelines for the Brisbane Baylands. Baylands roadways shall comply with the City's design standards and the supplemental roadway design guidelines set forth in EIR Appendix F.1, as determined by the City Engineer.

MM TRA-3e: Site Distance at Intersections and Driveways. Roadway improvement plans and proposed site-specific development and infrastructure projects shall also demonstrate adequate sight distance to meet the City's design standards at roadway intersections, driveways, and parking and loading areas prior to receiving construction permits.

MM TRA-3f: Bayshore Boulevard Improvements. Specific Plan development shall be responsible for the following improvements along Bayshore Boulevard to reduce hazardous conditions.

- Implement the Bayshore Mobility Plan (EIR Appendix F.1) or pay a fair share fee in lieu of improvements. At a minimum, Baylands development shall provide the following improvements along Bayshore Boulevard:
  - Allow right-turn access only for all unsignalized local and green streets that intersect Bayshore Boulevard, with features described in the Supplemental Roadway Design Guidelines (EIR Appendix F.1) and the Bayshore Mobility Plan (EIR Appendix F.1) and to ensure that speed differential does not result in hazardous conditions through adequate lane geometry and sight distances. Alternatively, left-turn access could be approved by the City Engineer following submittal and City review of substantial evidence that such access would not result in vehicle queues blocking through lanes, unsafe turning movements, inadequate sight distance, excessive speeds on local and green streets, or unsafe attempts by pedestrians to cross Bayshore Boulevard or bicyclists to make unsafe left turns.
  - Eliminate or convert the intersection of Bayshore Boulevard and Industrial Way from a traffic signal to a side-street stop-controlled intersection that allows right-turn in and out only, with the primary vehicular access to the southern portion of the Roundhouse District provided through Main Street.

    Provide side-street stop-controlled intersection and prohibit westbound left turns at the intersection of Main Street at the driveway east of Bayshore Boulevard adjacent to development block C2, which is shown as a traffic signal in the specific plan. Alternatively, the project applicant shall prepare a traffic study, including signal warrants and operational analysis that demonstrates the configuration of closely two spaced signalized intersections on Main Street would have adequate stacking distances to prevent peak hour vehicle queues to extend from one intersection to another.
- The above measures shall be constructed in coordination construction of new or modified intersections along and Bayshore Boulevard frontage improvements.

MM TRA-3g: Geneva Avenue Improvements. Modify the cross-section of the Geneva Avenue bridge to provide six through lanes (four lanes for vehicular travel and two lanes for bus rapid transit as required by MM TRA-2b. In addition to the features

described in the Specific Plan, Specific Plan development shall provide the following improvements:

- Modify the design of the western touchdown of the Geneva Avenue bridge to eliminate conflicting movements between bridge traffic and frontage roads, or between vehicles and bicycles by removing the eastbound frontage road or through a frontage road design that conforms to City design standards and the Supplemental Design Guidelines presented in Appendix F.1 for approval by the City Engineer.
- Redesign the roadway to provide adequate separation for bicyclists (minimum 2 feet for roadways with 35 miles per hour speed limits) to match NACTO standards.
- Specific Plan development shall contribute fair share payments for Candlestick Interchange improvements.

Construct the above measures in coordination with construction of the Geneva Avenue extension, which would require the addition of BRT lanes to the Geneva Avenue bridge over Caltrain and the construction of the Geneva Avenue bridge in coordination with the Phase 1 development.

MM TRA-3h: Green Streets. In addition to the features described in the Specific Plan, Specific Plan development shall provide the following to reduce hazardous conditions:

- Implement the design standards in the Supplemental Design Guidelines in (EIR Appendix F.1) to slow median vehicle speeds to 15 mph or slower and reduce the potential for conflicts between roadway users while ensuring adequate emergency access.
- Provide driveways on at least two block faces for each development block on green streets to reduce the concentration of vehicles on any one green street. Alternatively, the project applicant could demonstrate through a traffic study using the trip generation information presented in this study that traffic volumes on the green street would not exceed 1,000 vehicles per day.
- Establish and maintain a monitoring program for traffic volumes and speeds on green streets to ensure that daily vehicle volumes average 1,000 vehicles or less and that median vehicle speeds are 15 miles per hour or less as approved by the City Engineer. Should the monitoring program find that average daily vehicle volumes more than 1,000 vehicles or that median vehicle speeds exceed 15 miles per hour, additional features consistent with the Supplemental Roadway Design Guidelines to slow

traffic speeds and reduce the potential for cut through traffic shall be implemented as approved by the City Engineer at the Baylands' expense.

Construct the above measures features in coordination with construction of the green streets.

MM TRA-3i: Main Street and Campus Parkway Intersections at Bayshore Boulevard. In addition to the features described in the Specific Plan, Specific Plan development shall provide protected intersection features at the signalized intersections of Bayshore Boulevard with Main Street and Campus Parkway consistent with those presented in the Supplemental Roadway Design Guidelines (EIR Appendix F.1).

MM TRA-3j: Roundhouse Circle and East and West Park Boulevard. In addition to the features described in the Specific Plan, Specific Plan development shall provide the following improvements to reduce hazardous conditions:

- Modify the roadway cross-sections for Roundhouse Circle as well as East and West Park Boulevard to provide a minimum continuous 20-foot-wide fire access that is not part of a parking lane, bicycle facility or buffer as approved by the City Engineer and North County Fire Authority.
- Modify the cross-section for Roundhouse Circle to provide for a 10-foot parking lane.
- Provide stop signs for local roadways connecting to Roundhouse Circle and provide at least one marked pedestrian crossing location per intersection that meets the standards set forth in the Supplemental Roadway Design Guidelines (EIR Appendix F.1).

Construct the above measures features in coordination with construction of these local roadways.

MM TRA-3k: Tunnel Avenue. Tunnel Avenue shall be upgraded to current codes and standards per General Plan Program C.5a. In addition to the features described in the Specific Plan, Specific Plan development shall provide the following improvements to reduce hazardous conditions:

- Provide a two-way left-turn lane north of Lagoon Road or turn pockets at all driveways with adequate stacking distance to allow southbound vehicles to access driveways for existing and project land uses without stopping in the southbound through lane.
    - Design access features to provide adequate access for large trucks in and out of the Golden State Lumber site, along with safe movement of

personal vehicles, such as through traffic controls or modified access into parking facilities. These features shall be designed to ensure that personal vehicles or trucks do not back out onto Tunnel Avenue.

- Provide roundabouts, if approved by the City engineer (or traffic signals if roundabouts are not approved) at intersections of minor arterial and collector streets, including Lagoon Road, Beatty Avenue, the roadway connecting Tunnel Avenue to Geneva Avenue, East Campus Road, and Visitacion Creek North to facilitate access to the East Campus land uses, unless an improvement is demonstrated by substantial evidence approved by the City Engineer not to be warranted at a specific location.

Construct the above measures in coordination with other infrastructure as follows: (1) the segment of Tunnel Avenue at Golden State Lumber and to the north in coordination with the Geneva Avenue extension, (2) the segment to the south of Golden State Lumber prior to opening of the land uses in the Campus East District or in coordination with the Lagoon Road reconstruction.

MM TRA-3l: Sierra Point Parkway. In addition to the features described in the Specific Plan, Specific Plan development shall provide the following to reduce hazardous conditions:

- Provide a roundabout at the intersection of Sierra Point Parkway and Lagoon Road/US 101 southbound on- and off-ramps as part of the realignment of Lagoon Road, if approved by Caltrans (or a traffic signal if Caltrans does not approve a roundabout). This intersection shall be designed to allow for the continuation of the Bay Trail through this intersection consistent with the features presented in the Supplemental Roadway Design Guidelines (EIR Appendix F.1).

Construct the above in coordination with the existing City of Brisbane plans to add a roundabout or traffic signal at this off-ramp to support anticipated traffic growth associated with development at Sierra Point.

MM TRA-3m: Access to Community Fields. If it is to be constructed prior to relocation of the existing Fire Station No. 81, Community Fields Park shall maintain safe and prioritized access for emergency response vehicles at all times to the satisfaction of the Brisbane Public Works Director and North County Fire Authority. In addition, the design of the West Rail Trail shall not encroach into the Caltrain right-of-way and Machinery & Equipment property. Neither shall construction of the West Rail Trail be permitted to grade into the easterly foot of Icehouse Hill.

MM TRA-3n: Safe Routes to School. A sidewalk or multi-use path shall be provided along Main Street west of Bayshore Boulevard within the City of Brisbane to provide a

safe route to school for students to the proposed middle/high school within the Baylands as approved by the Brisbane City Engineer.

In addition, Specific Plan development shall provide the following safe routes to school improvements:

- High visibility crosswalks using striped pattern with ladder markings made of high visibility material such as thermoplastic tape instead of paint shall be provided at the following locations:
    - The intersections of Bayshore Boulevard at Geneva Avenue and at Main Street, which shall also be provided with protected intersection designs.
    - All intersections along Geneva Avenue between Bayshore Boulevard and the Caltrain right-of-way, as well as at intersections around the Baylands middle school.
    - Sidewalks on the east side of Bayshore Boulevard along the Specific Plan frontage.
- Crosswalks shall be provided no more than 250 to 500 feet apart along the frontage of the middle school to adequately accommodate students crossing at controlled locations.
- Provide school crossing guards at the intersections of Bayshore Boulevard at Geneva Avenue and at Main Street before and after school.
- Limit speed to 15 miles per hour within 500 feet of school when children are present at school.
- Advance Stop Bars shall be provided at stop-controlled or signalized crosswalks within 500 feet of the middle school to reduce vehicle encroachment into the crosswalk. This feature shall be designed in a manner consistent with advanced stop lines in compliance with national guidance provided in Section 3B.16 of Caltrans; the Manual on Uniform Traffic Control Devices.

The design of the middle school within the Baylands shall incorporate a combination of curb painting, stenciled directions within drop-off and pick-up areas, off-street queueing lanes, signage, and temporary barricades and traffic cones to:

- Separate vehicles from bicycles and pedestrians and safely direct vehicular and non-vehicular movement;
- Provide safe places for students to exit vehicles;

- Maintain through travel lanes on adjacent streets; and
- Provide easy egress routes for vehicles after dropping off or picking up students to minimize unsafe or disruptive vehicle turning movements.

MM TRA-3o: Continued Access to Recology, Golden State Lumber, Kinder Morgan, and Other Lands. Access via public street(s) to Recology, Golden State Lumber, Kinder Morgan Tank Farm, and other lands east of the Caltrain tracks that are not owned by the Specific Plan applicant shall be maintained at all times.

Impact TRA-4: Access for Emergency Response and Evacuation

Less than Significant with Mitigation Incorporated

Temporary lane closures that would temporarily cause traffic to back up and block usable travel lanes during construction would impair emergency access. The Specific Plan's proposed roadway network would provide multiple routes for emergency response, providing alternatives should any given roadway become inaccessible. In addition, the Bayshore Mobility Plan would maintain the ability for emergency vehicles to bypass traffic on Bayshore Boulevard by providing emergency traffic signal priority, median breaks, and queue jumps.

The Geneva Avenue bridge section four-lane roadway section with no shoulders could adversely affect emergency access. In addition, the proposed cross sections for Roundhouse Circle, East Park Boulevard, and West Park Boulevard would not meet minimum City standards for emergency vehicle access.

During a 100-year storm event, portions of key roadways such as Tunnel Avenue would not be available as an evacuation route, which would hinder emergency access. Emergency access would also not be available to development sites along Frontage Road, including basement parking areas.

Implementation of Mitigation Measures MM TRA-1a through MM TRA-1c would ensure adequate emergency response through construction zones within roadways affected by the 2025 Specific Plan project by providing for through lanes to be maintained at all times during project construction.

Implementation of Mitigation Measure MM TRA-2c would require continuous bus rapid transit lanes along the Geneva Avenue extension, including the bridge over the Caltrain rail line. The bus rapid transit lanes would facilitate emergency response across the bridge and along the entirety of Geneva Avenue, even during peak travel hours.

Mitigation Measure MM TRA-3c would require Specific Plan roadways to meet City design standards and Supplemental Roadway Design Guidelines developed for the Baylands. Implementation of this measure along with Mitigation Measures MM HWQ-4a and MM HWQ-

4b would ensure access for emergency service providers throughout the Baylands, regardless of the direction or mode of travel taken by evacuees leaving the site.

While the large volume of haul trucks on the existing two-lane Tunnel Avenue bridge during site grading would substantially reduce emergency vehicle access, Air Quality Mitigation Measure MM AQ-1f would require construction of an overland conveyor system to transport excavated soil material from the eastern portion of the site to the western portion in lieu of transport by trucks.

g. Air Quality

Impact AQ-1: Emissions of Criteria Air Pollutants for Which the Basin is in Nonattainment

Significant and Unavoidable

During site grading, average daily emissions of NO_X would exceed applicable thresholds. Once grading activities are completed, construction emissions would be minimal but would add to operational emissions of residential and commercial uses as buildings are completed and occupied. Thus, a significant impact would occur during site grading.

Operational emissions of reactive organic gases (ROG), oxides of nitrogen (NO_X), and particulate matter which consists of PM that is 10 microns in diameter or less (PM_{10}) from Phase 1 development would exceed annual and daily thresholds, resulting in a significant impact. The addition of Phase 2 development would increase operational emissions of these criteria pollutants and contribute sufficient emissions such that the Specific Plan would also exceed annual and daily thresholds for particulate matter which consists of PM that is 2.5 microns in diameter or less ($PM_{2.5}$), resulting in a significant impact.

Adherence to BAAQMD's best management dust minimization practices, which are mandated by the State Water Board Construction Stormwater General Permit, Order 2022-0057-DWQ, would reduce potential dust-related criteria air pollutant impacts during project construction. However, combined construction and operational emissions of ROG, NO_X, $PM_{2.5}$, and PM_{10} would, however, exceed annual and daily thresholds starting with Phase 1 buildout and continue through full buildout operations.

The provision of one aboveground, 2,000-gallon diesel or ethanol storage tank and two, 1,000-gallon mobile propane tanks to provide emergency fuel storage for City and emergency response use would not be a source of substantial TACs from volatile emissions. No acute, chronic, or carcinogenic TACs are emitted from uncombusted, stored diesel or propane fuel tanks would subject to its BAAQMD Rule 8-5 and be required to be designed to limit leaking, fugitive organic compounds.

Mitigation Measures MM AQ-1a through MM AQ-1c and MM AQ-1e would reduce ROG, NO_X, PM_{10}, and $PM_{2.5}$ emissions due to cleaner engine technology, and MM AQ-1d would reduce ROG emissions from architectural coating during construction by using lower VOC paints. Mitigation Measure MM AQ-1f would reduce ROG, NO_X, PM_{10}, and $PM_{2.5}$ emissions due to reduction of heavy truck trips for transport of excavated soil. Mitigation measures MM AQ-1g through MM AQ-1l would reduce operational emissions of ROG, NO_X, PM_{10}, and $PM_{2.5}$ for Phase 1 development and full Specific Plan buildout; however, emissions of all criteria pollutants would still exceed significance thresholds after mitigation. Impacts for construction, operations, and combined construction and operational would, therefore, be significant and unavoidable.

Program EIR Mitigation Measures

MM AQ-1a: Clean Off-Road Construction Equipment (Program EIR Mitigation Measure 4.B-2a). To reduce construction vehicle emissions, the following provisions shall be incorporated into construction specifications for all site-specific development and on- and off-site infrastructure projects:

i. Idling times shall be minimized either by shutting diesel-powered or gasoline-powered equipment off when not in use or reducing the maximum idling time of diesel-powered equipment to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.

ii. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. It shall be the contractor's responsibility to ensure that all equipment has been checked by a certified mechanic and determined to be running in proper condition prior to operation.

iii. All construction contract specifications shall include a requirement that on-road diesel trucks used to transport spoils consist of 2020 or newer model-year trucks with factory-built engines. All on-road diesel trucks shall be required to have emission control labels as specified in 13 CCR 2183(c) or any subsequent updates to this CARB regulation, whichever is more stringent. The construction contract specifications shall require that the contractor submit to the City a comprehensive inventory of all on-road trucks used to haul spoils. The inventory shall include each vehicle's license plate number, the engine production year, and a notation of whether the truck is in possession of an emission control label as defined in 13 CCR. The contractor shall update the inventory and submit it monthly to the City throughout the duration of the project.

MM AQ-1b: Tier 3 Off-Road Construction Equipment (Program EIR Mitigation Measure 4.B-2b). All construction contract specifications shall include a requirement that off-road construction equipment used for site improvements shall be equipped with Tier 3 (Tier 2 if greater than 750 hp) diesel engines or better. All diesel generators used for project construction must meet Tier 4 emissions standards. If new emissions standards are adopted by U.S. EPA during project construction, construction contract specifications shall incorporate whichever standard is more stringent.

Additional Construction Mitigation Measures

MM AQ-1c: Zero-Emissions and Tier 4 Off-Road Construction Equipment. The following measures shall be required for construction equipment, which would reduce ROG, NO_X, PM_{10} (including DPM), and $PM_{2.5}$ from equipment exhaust:

1. *Engine Requirements.* All off-road equipment greater than 25 horsepower shall meet the following requirements:
    a. All portable engines, such as generators, shall be electric. No propane or natural gas generators shall be used.
    b. Zero-emissions (ZE) construction equipment models, which currently include electric and hydrogen fuel cell technologies shall be used for all equipment that is commercially available as plug-in or battery-electric equipment. Portable equipment shall be powered by grid electricity. Electric equipment shall include, but is not limited to, concrete/industrial saws, sweepers/scrubbers, aerial lifts, welders, air compressors, fixed cranes, forklifts, and cement and mortar mixers, pressure washers, and pumps. To qualify for an exception, the applicant shall provide the City with evidence supporting its conclusion that electric equipment is not commercially available.
    c. Engines that cannot meet zero-emissions standards must meet or exceed either USEPA or CARB Tier 4 Final off-road emission standards.
    d. Engines shall be fueled with alternative fuels, including natural gas, propane, hydrogen fuel cell, and electricity, as commercially available and to the maximum extent feasible during each construction phase and activity.
    e. The Brisbane Community Development Director may permit other best technology that becomes commercially available in the future as substitution(s) for the above items a–d, provided that the project sponsor documents to the satisfaction of the Brisbane Community

Development Director that (1) the technology would result in ROG, NO_X, PM_{10}, and $PM_{2.5}$ emissions reductions equivalent or greater than the measure(s) it would substitute for and (2) it would not increase other pollutant emissions or exacerbate other impacts, such as noise. This may include new alternative fuels or engine technology for off-road equipment (such as electric or hydrogen fuel cell equipment) that is not available as of 2025.

f. Idling time for off-road equipment not in use shall be limited to 2 minutes, except as provided in exceptions to the applicable state regulations regarding idling for off-road equipment. Documentation shall be provided to equipment operators in multiple languages (e.g., English, Spanish, Chinese) to remind operators of the 2-minute idling limit.

g. Construction contractors shall be required to properly maintain and tune equipment in accordance with manufacturer specifications.

2. All portable construction tools and equipment less than 25 horsepower shall be electric powered.

3. For purposes of this mitigation measure, zero-emissions off-road equipment shall ordinarily be considered "commercially available" if the vehicle is capable of serving the intended purpose and is included in the California Air Resources Board's Advanced Clean Equipment (ACE) List, https://ww2.arb.ca.gov/our-work/programs/msei/off-road-advance-clean-equipment, included in California Air Resources Board's Clean Off-Road Equipment Voucher Incentive Project (CORE) catalog, https://californiacore.org/equipmentcatalog/, or listed as available in the US on the Global Commercial Vehicle Drive to Zero Off-Road Zero-Emissions Technology Inventory (ZETI) inventory, https://globaldrivetozero.org/tools/zeti-offroad/. The City shall be responsible for the final determination of commercial availability, based on all the facts and circumstances at the time the determination is made. For the City to determine that such vehicles are commercially unavailable, the operator must submit documentation from a minimum of three ZE off-road equipment dealers identified on the ACE or CORE websites demonstrating the inability to obtain the required ZE off-road equipment needed within 6 months.

4. *Exceptions to Requirement 1c, above.* The City of Brisbane Community Development Director may permit exceptions to the requirements of 1.a,

1.b, 1.c, 1.d, and 2 subject to the provisions of requirements in **Tables 4.9-10 and 4.9-11**, below.

Table 4.9-10: Exceptions to Mitigation Measure MM AQ-1d, Items 1.a, 1.b, 1.c, 1d, and 2

Requirement	Condition(s) for Exceptions
1.a. Electric engines for portable equipment 2. Electric equipment less than 25 horsepower	If electric power from the grid becomes unavailable within the Baylands with the outage anticipated to last more than two (2) working days, non-electric equipment may be used.
1.b Zero-Emissions (ZE) engines for construction equipment	The Brisbane Community Development Director may permit use of non-electric equipment should the construction contractor demonstrate to the Director's satisfaction that such zero-emissions equipment is not commercially available as defined above. Any non-zero-emissions equipment permitted for use by the Brisbane Community Development Director shall be the next cleanest piece of commercially available equipment that would reduce exhaust emissions of ROG, NO_X, PM_{10}, and $PM_{2.5}$.
1.c. Tier 4 Final emission standards	The Brisbane Community Development Director may permit use of equipment that does not meet Tier 4 Final standards such as but not limited to bore/drill rigs required for grading/shoring/excavation and for mobile cranes required for building construction should the construction contractor demonstrate to the Director's satisfaction that: (1) The contractor does not have the required type of equipment within its current available inventory, has ordered such equipment at least 60 days in advance and has made a good faith effort to lease or rent such equipment but it is not available; (2) A particular piece of Tier 4 final off-road equipment is technically or financially infeasible; (3) The equipment would not produce desired emissions reduction due to required operating modes; or (4) There is a compelling emergency need to use off-road equipment that is not Tier 4 Final compliant.
1.d. Alternative fuel engines for construction equipment	The Brisbane Community Development Director may permit use of non-alternative fueled equipment should the construction contractor demonstrate to the Director's satisfaction that: (1) The use of alternative fuels for internal combustion engines would negatively affect construction performance or void equipment warranties; or (2) If the use of alternative fuels would result in additional ROG, NO_X, PM_{10}, and/or $PM_{2.5}$ emissions compared to the proposed equipment.

NOTES: Equipment subject to any of the above criteria shall be the next cleanest piece of equipment that is commercially available, or another alternative that results in equivalent or greater reductions of ROG, NO_X, PM_{10}, and $PM_{2.5}$ emissions, according to **Table 4.9-11** below. Emerging technologies with verifiable emissions reductions supported by substantial evidence may also be employed in lieu of the step-down schedule below, if those technologies meet the requirements of 1.e, above.

Table 4.9-11: Engine Compliance Alternatives

Compliance Alternative	Minimum Engine Technology / Emissions Standard / Emissions Control
1	Alternative fuels that reduce ROG, NO_X, PM_{10}, and $PM_{2.5}$ emissions compared to the equivalent Tier 4 Final diesel engine.
2	Tier 4 Final
3	Tier 4 Interim

HOW TO USE THE TABLE: If zero-emissions engines are not available, then the Project sponsor shall meet Compliance Alternative 1. If off-road equipment meeting Compliance Alternative 1 are not available, then the Project sponsor shall meet Compliance Alternative 2. If engines that comply with Tier 4 Final off-road emission standards are not available, then the Project sponsor shall meet Compliance Alternative 3.

Sufficient documentation shall be provided by the construction contractor with a request for any exception described above to demonstrate the need for the requested exception. Any exception granted by the Brisbane Community Development Director shall be based on substantial evidence provided by the construction contractor that one or more of the above exception conditions exists.

MM AQ-1d: Super-Compliant VOC Architectural Coatings during Construction. "Super-compliant" volatile organic compound (VOC) (i.e., ROG) architectural coatings that meet the regulatory limits in South Coast Air Quality Management District rule 1113 (SCAQMD 2024),[7] which currently requires a limit of 10 grams VOC per liter shall be used during construction for all interior and exterior spaces and shall include this requirement on plans submitted for review to the planning department (BAAQMD architectural coatings regulations do not have a limit this low). The project sponsor shall submit a signed certification statement that this requirement has been incorporated into contract specifications.

MM AQ-1e: Clean On-Road Construction Trucks. Heavy-duty on-road construction trucks shall comply with the following, which would reduce ROG, NO_X, PM_{10}, and $PM_{2.5}$ emissions:

1. *Engine Requirements.*
    a. Use alternative-fueled or zero-emissions vehicles (ZEVs) that would reduce emissions below a diesel-fueled vehicle such as electricity, hydrogen fuel cell, natural gas, or propane. If alternative fuels are not commercially available, all on-road heavy-duty diesel trucks with a gross vehicle weight rating of 19,500 pounds or greater used within the Specific Plan area (such as haul trucks, water trucks, dump trucks,

[7] South Coast AQMD Rule 1113 is required for the Baylands since it is more stringent than comparable Bay Area AQMD requirements.

concrete trucks, and vendor trucks) shall be model year 2020 or newer.

b. Any other best technology commercially available in the future (i.e., not available as of 2025) may be used in lieu of or in addition to the above item 1.a, provided that (1) the technology would result in equivalent or greater ROG, NO_X, PM_{10}, and $PM_{2.5}$ emissions reductions; and (2) such measures would not increase other pollutant emissions or result in other impacts, such as noise.

c. Require the idling time for on-road vehicles be limited to two minutes, except as provided in exceptions to the applicable state regulations regarding idling for on-road vehicles. Documentation shall be provided to truck drivers in multiple languages (e.g., English, Spanish, Chinese) to remind operators of the 2-minute idling limit.

d. For purposes of this mitigation measure, an alternative-fueled and ZEV truck shall ordinarily be considered commercially available if the vehicle is capable of serving the intended purpose and is included in California's Hybrid and Zero-Emissions Truck and Bus Voucher Incentive Project, https://californiahvip.org/ or listed as available in the US on the Global Commercial Vehicle Drive to Zero inventory, https://globaldrivetozero.org/. The City shall be responsible for the final determination of commercial availability, based on all the facts and circumstances at the time the determination is made. In order for the City to make a determination that such vehicles are commercially unavailable, the operator must submit documentation from a minimum of three (3) ZEV dealers identified on the californiahvip.org website demonstrating the inability to obtain the required ZEVs or equipment needed within 6 months.

2. *Exceptions.* The lead agency grants an exception to the alternative fuel requirements of item 1.a if alternative fuels are not commercially available or the use of alternative fuels for internal combustion engines is not technologically feasible, would void truck warranties, or would result in additional ROG, NO_X, PM_{10}, and $PM_{2.5}$ emissions compared to traditional fuels. The waiver may be granted by the Brisbane Community Development Director based on substantial evidence provided by the project sponsor that one or more of the above waiver conditions exists.

3. The documentation, as described in Mitigation Measure MM AQ-2b item 3 above, shall include a description of each general category of on-road trucks required to comply with item 1, *Engine Requirements*. The

description shall also specify the engine model years and fuel type being used (e.g., diesel, electricity, natural gas).

4. The Certification Statement, as described in Mitigation Measure MM AQ2b item 4 above, shall apply to all applicable requirements for on-road trucks.

MM AQ-1f: Conveyor System for Transport of Excavated Material. An overland conveyor system shall be constructed to transport excavated soil material from the eastern portion of the site to the western portion in lieu of transport by trucks. The conveyor system shall be electric and shall include water sprays for dust reduction during transport. Movement of soil from the eastern to the western portion of the Specific Plan area by truck shall be permitted only if the California Public Utilities Commission does not approve a conveyor system crossing over the Caltrain right-of-way.

Additional Operations Mitigation Measures

MM AQ-1g: Super-Compliant VOC Architectural Coatings during Operation. Future tenant improvements provided by building owners shall use super-compliant VOC architectural coatings for all interior and exterior painting. "Super-compliant" coatings refer to paints that meet the more stringent regulatory limits in the current version of South Coast Air Quality Management District rule 1113,[8] which requires a standard of 10 grams VOC per liter or less (http://www.aqmd.gov/home/regulations/compliance/architectural-coatings/super-compliant-coatings).

MM AQ-1h: Best Available Emissions Controls for Stationary Emergency Generators. To reduce emissions of ROG, NO_X, PM_{10}, and $PM_{2.5}$ associated with operation of the proposed project's emergency generators, the project applicant shall implement the following measures.

1. Permanent stationary emergency generators installed on-site shall have engines that meet or exceed CARB Tier 4 Off-Road Compression Ignition Engine Standards (California Code of Regulations Title 13, Section 2423). If CARB adopts future emissions standards that exceed the Tier 4 requirement, the emissions standards resulting in the lowest ROG, NO_X, PM_{10}, and $PM_{2.5}$ emissions shall apply.
2. As non-diesel-fueled emergency generator technology becomes commercially available, and subject to the review and approval of the

[8] South Coast AQMD Rule 1113 is required for the Baylands since it is more stringent than current Bay Area AQMD requirements.

North County Fire Authority for safety purposes, non-diesel-fueled generators shall be installed in new buildings, provided that alternative fuels used in generators, such as electricity, hydrogen fuel cell, biodiesel, renewable diesel, natural gas, or other biofuels or other non-diesel emergency power systems, are demonstrated to reduce ROG, NO_X, PM_{10}, and $PM_{2.5}$ emissions compared to diesel fuel.

3. For each new diesel backup generator permit submitted to air district for the proposed project, the backup generator applicant shall submit the anticipated location and engine specifications to the Brisbane Community Development Director for review and approval prior to issuance of a permit for the generator. Once operational, all diesel backup generators shall be maintained in good working order for the life of the equipment, and any future replacement of the diesel backup generators must be consistent with the original generator's engine emissions specifications. The operator of the facility at which the generator is located shall maintain records of the testing schedule and emergency operations for each diesel backup generator for the life of that diesel backup generator and shall provide this information for review to the Brisbane Community Development Director within three months of requesting such information.

These features shall be submitted to the Brisbane Community Development Director for review and approval and shall be included on the project drawings submitted for the construction-related permit(s) or on other documentation submitted to the Brisbane Community Development Director prior to the issuance of any building permits.

MM AQ-1i: **Promote Use of Low-VOC Consumer Products.** To reduce ROG emissions associated with the project, the project sponsor shall provide education for residential and commercial tenants concerning low-VOC consumer products. Prior to receipt of any certificate of occupancy, the project sponsor shall develop electronic correspondence to be distributed by email annually and upon any new lease signing to residential and/or commercial tenants of each building within the Specific Plan area that encourages the purchase of consumer products that generate lower than typical VOC emissions.

MM AQ-1j: **Operational Truck Emissions Reduction.** The following measures shall be incorporated into the building design and construction contracts (as applicable) to reduce ROG, NO_X, PM_{10}, and $PM_{2.5}$ emissions associated with operational on-

road trucks, along with the potential health risk caused by exposure to toxic air contaminants from operational on-road trucks.

1. Equip all truck delivery bays with electrical hook-ups for diesel trucks at loading docks to accommodate plug-in electric truck transport refrigeration units (TRUs) or auxiliary power units during project operations.
2. Provide a notice on each commercial or office lease or building sale within the Baylands requesting businesses operating their own fleet of truck transport refrigeration units to exclusively use TRUs and auxiliary power units that are electric plug-in capable and trucks that use advanced exhaust technology (e.g., hybrid) or alternative fuels within the Baylands.
3. Prohibit diesel-powered TRUs from operating at loading docks for more than thirty minutes, and post signs at each loading dock presenting this TRU time limit.
4. All loading docks that are on a commercial property and can accommodate trucks with TRUs shall be equipped with electric vehicle (EV) charging equipment for heavy-duty trucks. This measure does not apply to temporary street parking for loading or unloading.
5. Prohibit trucks from idling for more than two minutes, and post "no idling" signs at the site entry point, at all loading locations, and throughout the Specific Plan area.

These features shall be submitted to the Brisbane Community Development Director for review and approval prior to the issuance of building permits and shall be included on the project drawings submitted for the construction-related permit or on other documentation submitted to the lead agency. ROG, NO_X, PM_{10}, and $PM_{2.5}$ emissions from project-related operational diesel trucks shall be reduced by implementing the following measures.

MM AQ-1k: **Electric Vehicle Charging Infrastructure.** Prior to building permit issuance for any site-specific development project that includes off-street parking, the applicant for such development shall demonstrate compliance with the most current California Green Building Standards (CALGreen Code) Tier 2 voluntary electric vehicle (EV) charging requirements or the mandatory requirements of the most recently adopted version of the City of Brisbane building code, whichever is more stringent. The installation of all EV charging equipment shall be included on the project drawings submitted for the construction-related permit(s) or on other documentation submitted to the City.

MM AQ-1l: Electric Landscaping Equipment. To reduce ROG, NO_X, PM_{10}, and $PM_{2.5}$ emissions associated with the project, only electric landscaping equipment shall be used within the Specific Plan area. No landscaping equipment powered by gasoline, diesel, propane, or other fossil fuels shall be used. The project applicant shall incorporate this requirement into the project design and tenant contracts (as applicable).

Impact AQ-2: Exposure of Sensitive Receptors to Substantial Pollutant Concentrations

Less than Significant with Mitigation Incorporated

Diesel particulate matter (DPM) emitted during construction activities would result in an excess cancer risk level of up to 16.0 in one million during site grading (16.9 over a 30-year exposure period starting with initiation of construction activities). DPM from operational activities would result in an excess cancer risk level of up to 13.0 in one million for on-site Baylands residents and the new middle school in the northwest corner of the Icehouse Hill district during the 30-year exposure period following Specific Plan buildout. These values exceed applicable thresholds and represent significant impacts. Acute and chronic, non-cancer hazard index (HI), and annual average $PM_{2.5}$ concentrations would not exceed significance thresholds.

The effectiveness of Mitigation Measure MM AQ-1c, Zero-Emission and Tier 4 Off-Road Construction Equipment, was quantified in the analysis and the results presented in **Table 4.9-18** through **Table 4.9-21**. Although Mitigation Measures MM AQ-1e, MM AQ-1g, MM AQ-1i, and MM AQ-1k, would further reduce the health risks, as described above, they were not used to calculate the mitigated emissions, because MM AQ-1c was sufficient to show a reduction to below the significance threshold. MM AQ-1j would reduce emissions from mainly gasoline-powered passenger vehicles, and MM AQ-1i would reduce emissions from mainly from gasoline-powered landscaping equipment. These sources would contribute a negligible amount to health risks compared to the substantial contribution to health risk from DPM.

Implementation of these Mitigation Measures would:

- Reduce excess cancer risk during grading and all construction to a maximum of 5.1 in 1 million, which is well below the significance threshold of 10 in 1 million.
- Reduce the maximally exposed child receptor during operations to an excess cancer risk level of up to 5.9 in 1 million for a child residing adjacent to the Caltrain rail line north of Geneva Avenue and to 4.9 in 1 million for students at the Baylands middle school, both below the significance threshold of 10 in 1 million.
- Reduce the maximally exposed individual residence to 4.5 in 1 million for offsite residents and 5.1 in 1 million for onsite residents, both below the significance threshold of 10 in 1 million.

Thus, impacts would be less than significant with mitigation incorporated.

Impact AQ-3: Odors

Less than Significant with Mitigation Incorporated

Because construction-related odors from diesel equipment and vehicles would be localized and temporary, and low-VOC surface coating materials in accordance with BAAQMD Rules would reduce potentially objectionable odors from painting operations, construction activities, including the use of diesel and surface coating materials would be less than significant.

The large majority of uses that would be permitted by the Specific Plan would not generate objectionable odors. While food preparation at restaurants and hotels, as well as coffee roasting within the Baylands, both of which are permitted by the Specific Plan, could result in odor generation, such odors would be generated on a small scale and not have a substantial adverse effect on a substantial number of people, as would be demonstrated by the required monitoring of BAAQMD regulation 7 for any odor complaints.

Daily operations of the water recycling facility could result in objectionable odors to nearby sensitive receptors. The water recycling facility, which is proposed on the east side of the Caltrain right-of-way, would be located approximately 500 feet from the closest residential receptor in the Roundhouse District. The closest, off-site residents would be located approximately 2,000 feet west of the facility. The odor impact of water recycling facility operations would therefore be significant.

Implementation of mitigation measures would establish performance standards for water recycling facility operations, require installation of an odor control system, and mandate adherence to best management practices. Because of the odor controls required by Mitigation Measure MM AQ-3a through MM AQ-3d, the water recycling facility would not emit odors detectable at or beyond the property line of the facility. Impact AQ-3 would thus be less than significant with mitigation incorporated.

Program EIR Mitigation Measures

MM AQ-3a: Recycled Water Plant Odor Management Plan (Program EIR Measure 4.B-8). Prior to the start of operation pursuant to issuance of a permit to operate from the RWQCB, the recycled water plant shall formulate and implement a progressive Odor Management Plan for review and comment by the BAAQMD prior to review and approval by the City. The Odor Management Plan shall select a sufficient number of control measures from the following menu of options identified by the BAAQMD to attain a performance standard which

meets the odor detection thresholds of BAAQMD Regulation 7 as achieved and verified by the BAAQMD inspector.

i. Activated carbon filter/carbon absorption
ii. Biofiltration/bio trickling filters
iii. Fine bubble aerator
iv. Hooded enclosures
v. Wet and dry scrubbers
vi. Caustic and hypochlorite chemical scrubbers
vii. Ammonia scrubber
viii. Energy efficient blower system
ix. Thermal oxidizer
x. Capping/covering storage basins and anaerobic ponds
xi. Mixed flow exhaust
xii. Wastewater circulation technology
xiii. Exhaust stack and vent location with respect to receptors

Additional Mitigation Measures

MM AQ-3b: **Odor Control System.** The water recycling facility shall install sufficient odor controls to manage objectionable odors in compliance with BAAQMD Regulation 7 and meet the performance standard set forth in Section 7-302 of that regulation, which reads:

> "**7-302 Limit on Odorous Substances at or Beyond Property Line:** A person shall not discharge any odorous substance which causes the ambient air at or beyond the property line of such person to be odorous and to remain odorous after dilution with four parts of odor-free air."

To control odors, wastewater processing tanks/structures shall be enclosed and/or covered, and under negative pressure, and provided with positive ventilation through an odor control system such as a two-stage process that involves a biological trickling filter followed by granular activated carbon.

MM AQ-3c: **Hydrogen Sulfide and Odor Management Program for the WRF.** Prior to construction of the WRF, the project applicant shall develop a Hydrogen Sulfide and Odor Management program (HSOM Program) at the WRF for review and approval by the Community Development Director. The HSOM Program shall

address hydrogen sulfide and odor management using a performance-based approach designed to meet the regulatory ambient air concentrations established in BAAQMD Regulation 9, Rule 2, (i.e., 0.06 ppm averaged over three consecutive minutes, or 0.03 ppm averaged over any 60 consecutive minutes) and to limit public complaints. The HSOM Program shall include best management practices and emissions controls as follows:

1. For grit and screenings, refuse containers shall be odor proof and contained within an area draining to the sanitary sewer.
2. Primary screenings shall be housed in a ventilated enclosure at the WRF(s).
3. Carbon absorption, biofiltration, or ammonia scrubbers shall be installed at the WRF(s).
4. Ferrous chloride injection for hydrogen sulfide removal may also be installed and implemented if necessary.

The project applicant shall implement the HSOM Program on an ongoing basis and provide the Directors or the Directors' designees with an annual report to describe implementation of the program and any adjustments needed to improve performance.

The HSOM Program shall address odor complaints that occur over time and shall designate WRF staff to receive and respond to complaints. The name and contact information of the responsible WRF staff shall be posted in a noticeable location on each WRF facility. The performance standard for odors shall be based on a three-tier threshold based on 30-day, 90-day, and three-year averaging times for complaints. The performance standards that must be met shall be as follows:

1. Three or more violation notices for public nuisance related to odors issued by the BAAQMD within a 30-day period;
2. Odor complaints from ten or more complainants within a 90-day period; or
3. Five or more confirmed odor complaints per year averaged over three years as an indication of a significant odor impact from a facility.

If one or more of these standards are not met, the project applicant shall revise the program and make any necessary improvement to the WRF odor controls to achieve all performance standards in subsequent reporting years.

MM AQ-3d: **Future Recordkeeping.** The new odor control units proposed as part of the WRF would also be subject to recordkeeping requirements and conditions in the

BAAQMD's Permit to Operate for the purpose of abating any public nuisance from odors. The recordkeeping shall log all citizen complaints received by the BAAQMD. If citizen complaints exceed 10 or more within a 90-day period (per BAAQMD Regulation 7), additional odor controls would be required.

Impact AQ-4: Consistency with the San Francisco Bay Area Clean Air Plan

Less than Significant

The Specific Plan would support the primary goals of the 2017 Clean Air Plan because it is a mixed-use, transit-oriented development generating and using sustainable energy for residential, commercial, and other uses. In addition, the Specific Plan includes many of the control measures from the 2017 Clean Air Plan.

h. Greenhouse Gas Emissions

Impact GHG-1: Specific Plan Area Greenhouse Gas Emissions

Significant and Unavoidable

The Baylands Specific Plan would result in a net increase in average annual greenhouse gas (GHG) emissions generation of 51,260 $MTCO_2e$. The effect of regulations that are not included in the CalEEMod or EMFAC2021 models and thus not quantified in this EIR would be to reduce GHG emissions from medium- and heavy-duty trucks and emissions from light duty passenger vehicles. However, such reductions would not be sufficient to offset the Specific Plan's net annual increase.

Implementation of identified GHG and Air Quality mitigation measures would not be able to reduce Baylands GHG emissions to achieve a "net-zero" increase in GHG emissions.

Implementation of Air Quality Mitigation Measures MM AQ-1e through MM AQ-1l, along with Greenhouse Gas Mitigation Measure MM GHG-1d, would result in a quantifiable reduction of GHG emissions by approximately 4,138 $MTCO_2e$ per year (refer to Appendix H.1) After subtracting this estimated reduction from the emissions shown in **Table 4.10-5**, Baylands development would still exceed the net-zero threshold for Specific Plan area land uses. Other mitigation measures (Air Quality Mitigation Measures MM AQ-1a, MM AQ-1b, MM AQ-1c, MM AQ-1f, MM AQ-1j, and MM AQ-1k, along with Greenhouse Gas Mitigation Measures MM GHG-1a, MM GHG-1b, MM GHG-1c, and MM GHG-1e) for which an estimated reduction is not readily quantifiable along with the regional VMT reduction identified in Section 4.8, *Transportation*, would only achieve marginally more reductions, and Baylands GHG emissions would remain above the GHG-1 net-zero increase threshold for Specific Plan area land uses.

Thus, the only remaining feasible measure to achieve the "net-zero" GHG emissions threshold[9] would be implementation of the GHG emissions offset program set forth in Mitigation Measure MM GHG-1e. However, implementation of a large-scale GHG offset credit program such as required by Mitigation Measure GHG GHG-1e would be difficult given the large number of GHG offset credits required, their locational parameters, the timing of their purchase and retirement, and their future availability. Because the availability of GHG offset credits at the time they need to be purchased is uncertain, achieving a net zero increase in Baylands emissions cannot be guaranteed.

Additional Mitigation Measures

MM GHG-1a: Low Global Warming Potential Refrigerants. Refrigerants with a global warming potential of 1,400 or less[10] shall be used in all heat pumps installed in residential and nonresidential buildings, including all HVAC systems, water heaters, and refrigeration appliances. Examples of such low global warming potential include, but are not limited to natural refrigerants such as CO_2, ammonia (NH_3), and hydrocarbons, or next generation low-GWP synthetic refrigerants like hydrofluoroolefin-1234yf.

MM GHG-1b: Preferred Parking for Alternative-Fueled Vehicles and Carsharing Vehicles. Preferential parking for ZEVs (designated and proximate to the building entry) shall be provided for commercial, office, and hotel uses, as well as guest parking at a rate 10 percent above regulatory provision requirements. In addition, preferential parking shall be provided for ridesharing vehicles (designated and proximate to the building entry) site at a rate 10 percent above City requirements for a transportation demand management plan.

MM GHG-1c: Renewable Fuel Shuttles. The Baylands shuttle system described in Specific Plan Section 6.3.4 shall utilize zero-emission vehicles or run entirely on 100 percent renewable fuels.

MM GHG-1d: Renewable Fuels for On-Site Water Recycling Facilities. The Baylands water recycling facility shall be designed and operated using 100 percent renewable fuels, including carbon-free electricity provided by Pacific Gas & Electric or Peninsula Clean Energy or by on-site renewable energy generation.

MM GHG-1e: GHG Offset Credits. In addition to implementing all feasible construction- and operation-related land use design practices and related mitigation measures for

[9] "Net zero" GHG emissions as no increase in Baylands GHG emissions, including the Specific Plan's 30-year amortized construction plus its new operational GHG emissions.

[10] The U.S. EPA guidance for transitioning to low-GWP alternatives in commercial refrigeration provides available refrigerants with a GWP of 1,400 or less, https://www.epa.gov/sites/default/files/2016-12/documents/international_transitioning_to_low-gwp_alternatives_in_commercial_refrigeration.pdf.

the reduction of construction and operational greenhouse gas (GHG) emissions, the Specific Plan applicant shall retire GHG offset credits in a quantity sufficient to offset 100 percent of the Project's construction emissions and 100 percent of the Project's operational emissions, for a 30-year period, consistent with the performance standards and requirements set forth below. GHG offset credits within the City of Brisbane and regionally within the County shall be prioritized (see *Locational Performance Standards* below).

The Applicant may opt to prepare a Project-wide GHG Emissions Reduction Plan (Plan) to "true-up" re-modeled Project emissions with the amount of GHG offset credits needed to be retired to offset 100 percent of the Project's operational emissions, as stipulated in the section *Emissions Inventory "True Up" Procedures and Standards* below.

Purchase and Retire GHG Offset Credits: The Specific Plan applicant shall purchase and retire GHG offset credits sufficient to offset the project's post-mitigation GHG emissions for the life of the project (assumed to be 30 years) as shown in **Table 4.10-6**.

Table ES-6: Required GHG Emissions Offsets ($MTCO_2e$)

	Construction Emissions[a]		Operational Emissions[b]		Combined Emissions	
	Unmitigated	Mitigated[c]	Unmitigated	Mitigated[c]	Unmitigated	Mitigated[c]
Phase 1[d]	65,007	61,227	1,089,199	1,088,840	1,154,206	1,150,067
Phase 2	7,756	7,756	375,855	375,855	383,641	383,611
TOTAL	**72,763**	**68,983**	**1,465,055**	**1,464,696**	**1,537,818**	**1,533,679**

NOTES: CO_2e = carbon dioxide equivalent; MT = metric tons

a. Construction emissions are total estimated emissions over the entirety of the construction period.
b. All operational values are calculated based on unrounded annual emissions multiplied by 30 years.
c. Mitigated emissions include implementation of the quantifiable air quality and GHG mitigation measures.
d. Phase 1 construction emissions are inclusive of grading.

For construction, the project applicant shall purchase and retire GHG offset credits necessary to offset construction-generated emissions before obtaining the first building permit in each phase of construction, for a total of two offset payments over both construction phases. Alternatively, payments may occur gradually as long as enough offsets are retired in time to offset total construction emissions for each phase.

The project applicant shall also purchase and retire GHG offset credits necessary to offset the cumulative residual increase in operational emissions over the life of the project before the City issues the final certificate of occupancy for the first building in each phase of construction, for a total of two offset payments over two construction phases.

GHG Offset Credit Phasing: The project applicant shall purchase and retire GHG offset credits for each of the two construction phases and two operational phases as follows.

- ***Construction—Phase 1:*** Before obtaining the first grading or other construction-related permit for construction, the project applicant shall purchase and retire the first installment of GHG offset credits for construction emissions as presented in the **Table ES-6**, above.
- ***Construction—Phase 2:*** Before obtaining the first grading or other construction-related permit in Phase 2 of construction, the project applicant shall purchase and retire GHG offset credits for construction emissions as presented in the table above.
- ***Operations—Phase 1:*** Before the City issues the final certificate of occupancy for the first building in Phase 1, the project applicant shall purchase the first installment of GHG offset credits for operational emissions as presented in the table above.
- ***Operations—Phase 2:*** Before the City issues the final certificate of occupancy for the first building in Phase 2, the project applicant shall purchase the second installment of GHG offset credits for operational emissions as presented in the table above.

GHG Offset Credit Standards – Eligible Registries, Acceptable Protocols and Defined Terms: "GHG offset credit" shall mean an instrument, credit or other certification verifying the reduction GHG emissions issued by one of the following CARB-approved carbon registries: the American Climate Registry, the Climate Action Reserve, and Verra (formerly Verified Carbon Standard). The GHG offset credits shall be third-party verified and enforceable in accordance with the registry's applicable standards, practices, or protocols. The Specific Plan applicant shall provide funding for the City to retain the services of a third-party expert who meets the qualifications described below.

GHG offset credits shall include, but are not limited to, an instrument, credit or other certification issued by these registries for GHG reduction activities within California. Further, no GHG offset credits shall originate from international areas, as discussed in the "Locational Performance Standards" section below. The Project shall neither purchase GHG offset credits from the Clean Development Mechanism (CDM) registry nor purchase offsets generated under CDM protocols. Qualifying GHG offset credits presented for compliance with this mitigation measure may be used provided that the evidence required by the "Reporting and Enforcement Standards" below is submitted to the City

demonstrating that each registry shall continue its existing practice of requiring the following for the development and approval of protocols or methodologies:

i) Adherence to established GHG accounting principles set forth in the International Organization for Standardization (ISO) 14064, Part 2 or the World Resources Institute/World Business Council for Sustainable Development (WRI/WBCSD) Greenhouse Gas Protocol for Project Accounting; and

ii) Oversight of the implementation of protocols and methodologies that define the eligibility of GHG offset credit projects and set forth standards for the estimation, monitoring, and verification of GHG reductions achieved from such projects. The protocols and methodologies shall:

   a. Be developed by the registries through a transparent public and expert stakeholder review process that affords an opportunity for comment and is informed by science;

   b. Incorporate standardized offset crediting parameters that define whether and how much emissions reduction credit a GHG offset project should receive, having identified conservative project baselines and the length of the crediting period, and considered potential leakage and quantification uncertainties;

   c. Establish data collection and monitoring procedures, mechanisms to ensure permanency in reductions, and additionality and geographic boundary provisions; and,

   d. Adhere to the principles set forth in the program manuals of each of the aforementioned registries, as such manuals are updated from time to time.

Further, any GHG offset credit used to reduce the project's GHG emissions shall be a GHG offset credit that represents the past or forecasted reduction or sequestration of one metric ton of carbon dioxide equivalent that is "not otherwise required" (CEQA Guidelines Section 15126.4(c)(3)). Each GHG offset credit used to reduce GHG emissions shall achieve additional, real, permanent, quantifiable, verifiable, and enforceable reductions, which are defined for purposes of this mitigation measure as follows:

i) "Additional" means that the GHG offset credit is not otherwise required by law or regulation, and not any other GHG emissions reduction that otherwise would occur.

ii) "Real" means that the GHG reduction underlying the GHG offset credit results from a demonstrable action or set of actions and is quantified

under the protocol or methodology using appropriate, accurate, and conservative methodologies that account for all GHG emissions sources and sinks within the boundary of the applicable carbon offset project, uncertainty, and the potential for activity-shifting leakage and market-shifting leakage.

iii) "Verifiable" means that the GHG reduction underlying the GHG offset credit is well documented, transparent, and set forth in a document prepared by an independent verification body that is accredited through the American National Standards Institute (ANSI).

iv) "Permanent" means that the GHG reduction underlying the GHG offset credit is not reversible; or, when GHG reduction may be reversible, that a mechanism is in place to replace any reversed GHG emission reduction.

v) "Quantifiable" means the ability to accurately measure and calculate the GHG reduction relative to a project baseline in a reliable and replicable manner for all GHG emission sources and sinks included within the boundary of the GHG offset credit project, while accounting for uncertainty and leakage.

vi) "Enforceable" means that the implementation of the GHG reduction activity must represent the legally binding commitment of the offset project developer to undertake and carry it out.

The above definitions are provided as criteria and performance standards associated with the use of GHG offset credits. The City hereby clarifies that such criteria and performance standards are intended only to further construe the standards under CEQA for mitigation related to GHG emissions (see, e.g., State CEQA Guidelines Section 15126.4(a), (c)), and are not intended to apply or incorporate the requirements of any other statutory or regulatory scheme not applicable to the project (e.g., the Cap-and-Trade Program).

To be eligible to be used to meet this mitigation measure, GHG offset credits must be generated and verified in accordance with published protocols and other applicable standards that can demonstrate to the satisfaction of the City's third-party expert and reviewer that all six of these environmental integrity requirements are substantively satisfied. All GHG offset credits purchased and retired from the registries shall have been verified by an independent verifier who meets stringent levels of professional qualification (i.e., ANSI National Accreditation Board Accreditation Program for Greenhouse Gas Validation/Verification Bodies or a Greenhouse Gas Emissions Lead Verifier accredited by CARB), or an expert with equivalent qualifications to the extent necessary to assist with the verification.

Without limiting the generality of the foregoing, in the event that an approved registry becomes no longer accredited by CARB and the GHG offset credits cannot be transferred to another accredited registry, the project applicant shall comply with the rules and procedures for retiring and/or replacing offset credits in the manner specified by the applicable protocol or other applicable standards, including (to the extent required) by purchasing an equivalent number of credits to recoup the loss.

Locational Performance Standards: All GHG offset credits required to reduce the project's GHG emissions shall originate from the following geographic locations (in order of priority): (1) On-site GHG reduction measures or credits over and above which is already required or proposed as part of the 2025 Specific Plan project; (2) within the City of Brisbane outside of the Baylands Specific Plan area; (3) off-site, incorporated areas of San Mateo County; (4) off-site, unincorporated areas of the San Mateo County; (5) off-site areas within nine-county Bay Area Region; and (6) off-site areas within the State of California. No GHG offset credits shall originate from off-site, out-of-state or international areas. As listed, geographic priorities would focus first on local reduction options to ensure that reduction efforts achieved locally would provide cross-over, co-benefits to other environmental resource areas.

For purposes of implementing this mitigation measure, the City shall require the GHG offset credits to adhere to the following locational performance standards in order to reduce the project's construction and operational GHG emissions:

i) The project shall use all available GHG offset credits within the City of Brisbane or San Mateo County (the first priority is within incorporated areas of the County and the second priority is within unincorporated areas of the County). "Available," for purposes of this subdivision, means that the project applicant provide objective, verifiable evidence to the City documenting that such GHG offset credits are available for retirement from GHG offset credit projects within the subject geography no later than at the time of application for grading permit issuance. The objective, verifiable evidence to be provided includes a market survey report that shall comply with the following content requirements:

   a. Preparation by a GHG offset credit broker with a minimum of 10 years of experience assisting with transactions in emissions markets;

   b. Identification of the carbon registry listings reviewed for GHG offset credit availability, including the related date of inquiry; and,

   c. Identification of the geographic attributes of GHG offset credits that are offered for sale and available for retirement.

ii) In the event that a sufficient quantity of GHG offset credits are not "available" in San Mateo County, the project applicant shall obtain the remaining GHG offset credits needed from within the none-county Bay Area region (third priority). For the definition of "available," see subdivision i) immediately above.

iii) In the event that a sufficient quantity of GHG offset credits are not "available" in the nine-county Bay Area region, the project applicant shall obtain the remaining GHG offset credits needed from within the State of California (third priority). For the definition of "available," see subdivision i) immediately above.

iv) In the event that a sufficient quantity of GHG offset credits are not "available" in San Mateo County or the State of California, the project applicant shall obtain the remaining GHG offset credits needed from within the United States (fifth priority). For the definition of "available," see subdivision i) immediately above.

In the unlikely event that an approved registry becomes no longer approved by CARB and the GHG offset credits cannot be transferred to another CARB-approved registry, the project applicant shall comply with the rules and procedures for retiring and/or replacing offset credits in the manner specified by the applicable protocol, standard, or methodology, including (to the extent required) by purchasing an equivalent number of credits to recoup the loss.

Emissions Inventory "True Up" Procedures and Standards: As new federal, state and local regulations are adopted or technological advancements occur, the quantity of GHG emission reductions needed to demonstrate achievement of the no net increase in GHG emissions may decrease. Therefore, the amount of GHG offset credits needed may be reduced if the Applicant can demonstrate, with substantial evidence, that changes in regulation or law, or other increased technological efficiencies have reduced the total CO2e emitted by the Project. As described further in the following paragraph, any modification to the emissions reduction value stated herein shall require approval from the City of Brisbane Community Development Director or the Director's designee, as considered pursuant to a noticed public hearing process that complies with applicable legal requirements, including those set forth in CEQA for the post-approval modification of mitigation implementation parameters.

Specifically, if the Applicant elects to process a "true-up" exercise subsequent to the City's certification of the Final EIR and approval of the Project, the Applicant shall provide an updated operational GHG emissions inventory for the Project that includes emissions from mobile sources, energy, area sources, water

consumption, and solid waste. Mobile sources must include off-road equipment, on-road vehicles (on-site and off-site), and rail. Subject to the satisfaction of the City of Brisbane Community Development Director or the Director's designee, these calculations shall be conducted using a City-approved model and/or methodology and must validate the continuing adequacy of modeling inputs used in the EIR that are not proposed to be altered as part of the "true-up" exercise. The inclusion of the validation requirement ensures that any updated operational GHG emissions inventories for the Project fully account for then-existing information that is relevant to the emissions modeling. For additional detail and requirements on the "true-up" exercise, see subsection 4.c Emissions Inventory "True Up" Compliance below.

The "true up" operational GHG emissions inventory, if conducted, will be provided in the form of a Project-wide GHG Emissions Reduction Plan (GHG Plan) to the City of Brisbane Community Development Director or the Director's designee prior to the issuance of building permits for the next build-out phase. The subject technical documentation shall be prepared by a City-approved, qualified air quality and greenhouse gas technical specialist.

In all instances, substantial evidence must confirm that any reduction to the total GHG offset credits value as identified in the certified EIR for the Project is consistent with the commitment to achieve a no net increase in GHG emissions for the 30-year life of the Project.

Reporting and Enforcement: On an annual basis, by March 1 of each year, the project applicant shall submit a letter to the City of Brisbane Sustainability Manager or the Manager's designee confirming implementation of the emission reduction strategies listed in the GHG reduction plan and this EIR.

In addition, before the City issues the final certificate of occupancy for the first building constructed in each phase, the applicant shall provide copies of GHG offset credit contracts demonstrating required purchases, along with records of their retirement, to the Community Development Director or the Director's designee.

For purposes of demonstrating that each GHG offset credit is additional, real, permanent, quantifiable, verifiable and enforceable, the reports shall include (i) the applicable protocol(s) and methodologies associated with the GHG offset credits; (ii) the third-party verification report(s) and statement(s) affiliated with the GHG offset credit projects; (iii) the unique serial numbers assigned by the registry(ies) to the GHG offset credits to be retired, which serves as evidence that the registry has determined the GHG offset credit project to have been implemented in accordance with the applicable protocol or methodology and

ensures that the GHG offset credits cannot be further used in any manner; and (iv) the locational attributes of the GHG offset credits. The reports also shall append the market survey report described in the "Locational Performance Standards" provision above.

If the City determines that the project's GHG offset credits do meet the requirements of this mitigation measure, the GHG offset credits can be used to reduce project GHG emissions and project permits shall be issued. Upon an affirmative finding from the City that the project's GHG offset credits are eligible for use under this measure, and prior to permit issuance, the City shall confirm that the project applicant has included, in their GHG offset credit agreement(s), a requirement that the GHG offset credit seller(s) provide the City with reasonable notice of any emissions reversal from the GHG offset credits that are the subject of the transaction(s). The City also shall confirm that the project applicant's purchase agreement(s) requires the seller(s) to provide the City with information and evidence regarding the steps taken by the applicable registry(ies) and GHG offset credit project developer(s) to rectify any reversal in accordance with applicable program manuals, protocols, and methodologies, and provide supporting documentation from the registry(ies) to substantiate the correction of the reversal. In the event that the City concludes a GHG offset credit reversal has not been sufficiently corrected within a reasonable period of time based on the nature of the reversal and the standards set forth in the applicable program manuals, protocols and methodologies, the City shall require an equivalent quantity of substitute GHG reductions are achieved. Methods to achieve the reductions could include requiring the project applicant to secure and retire substitute GHG offset credits meeting the requirements of this mitigation measure in a quantity equivalent to those reversed.

If the City determines that the project's GHG offset credits do not meet the requirements of this mitigation measure, the offsets cannot be used to reduce project GHG emissions and project permits shall not be issued. Additionally, the City may issue a notice of non-consistency and cease permitting activities in the event that the City determines the GHG offset credits provided to reduce project GHG emissions are not compliant with the aforementioned standards. In the event of such an occurrence, project permitting activities shall not resume until the project applicant has demonstrated that the previously provided GHG offset credits are compliant with the standards herein *or* have provided substitute GHG offset credits achieving the standards of this mitigation measure in the quantity needed to achieve the required emission reduction.

This will serve as documentation to fully enforce the provision that the project will result in net-zero GHG emissions for the Specific Plan's 30-year project life.

Emissions Inventory "True Up" Compliance Reporting

(i) ***General Requirements.*** If the Applicant chooses to prepare a Project-wide GHG Emissions Reduction Plan (GHG Plan), pursuant to section 3) *Emissions Inventory "True Up" Procedures and Standards* above, the Project sponsor shall retain a qualified air quality consultant to develop the GHG Plan) for implementation over the life of the Project in accordance with the requirements of this mitigation measure.

The GHG Plan shall quantify, using the most current information available, operational GHG emissions for the life of the Project (defined as 30 years of operation). The Plan shall specify anticipated GHG emission reduction measures sufficient to reduce or offset these emissions in accordance with the standards set forth above, such that the resulting GHG emissions are below the City's "no net increase" threshold of significance pursuant to CEQA.

For each phase or sub-phase of development, the Plan shall be updated as set forth in greater detail below. At all times throughout the life of the Project, the GHG Plan shall demonstrate that all operational activities are below the City's "no net increase" threshold of significance pursuant to CEQA for (1) operational activities already completed, permitted, and being proposed for permitting; and (2) anticipated future operational activities.

The City shall retain the services of a third-party expert to assist with the City's review and approval of the GHG Plan. The third-party expert shall also assist the City with its review and approval of updates to the GHG Plan and Progress Reports, as described below. All costs relating to the third-party expert, including City review of its services, shall be paid by the Applicant.

The GHG Plan shall identify GHG Emission Reduction Measures that shall be implemented to achieve the "no net increase" CEQA significance threshold. Measures shall be verifiable and feasible to implement, and the Plan shall identify the person/entity responsible for each measure, each measure's reduction amount, and the person/entity responsible for monitoring that reduction, all subject to review and approval by the City. The GHG Plan shall also identify the required number of GHG offset credits to achieve the "no net additional" threshold.

(ii) ***Additional Emission Reduction Measures.*** The following types of measures may be included in the GHG Plan, as necessary, to meet the

requirements of this mitigation measure and the "no net increase" GHG emissions requirement for the Project:

(1) *Additional or substitute measures and technology to reduce GHG emissions from Project construction or operations that are not currently known or available:* this may include new energy systems (such as battery storage), new transportation systems (such as autonomous vehicle networks), or other technology (such as carbon capture and storage) that is not currently available at the project-level, provided that the GHG Plan demonstrates to the City's satisfaction that such measures are equally or more effective as existing available measures, including those described above and listed in Mitigation Measures MM GHG-1a through MM GHG-1d.

Impact GHG-2: Effect on Regional GHG Emissions

Less than Significant

The Specific Plan's location in relation to transit, its mix of land uses, and implementation of TDM programs result in substantially lower per capita VMT than the regional average for Specific Plan area employees and workers. The Specific Plan's per capita VMT was also analyzed on a regional basis, comparing cumulative future 2040 regional VMT with and without the Specific Plan development.[11] As indicated in **Table 4.8-12**, the Baylands Specific Plan would reduce future cumulative 2040 daily regional VMT by 80,000 miles at buildout (105,000 miles with construction of Candlestick interchange improvements).

Because the 2025 Specific Plan project would not increase and would likely reduce regional GHG mobile source emissions, Impact GHG-2 would be less than significant.

Impact GHG-3: Consistency with Applicable Greenhouse Gas Emissions Reduction Plans, Policies, Performance Standards, and Regulations

Less than Significant with Mitigation Incorporated

The 2025 Specific Plan Project is consistent with many but not all applicable greenhouse gas emissions reduction plans, policies, performance standards, and regulations. It would not, however, obstruct implementation of relevant Scoping Plan actions to reduce GHG emissions

[11] The cumulative future 2040 without Specific Plan scenario assumes that the 2,200 dwelling units, 6.5 million square feet of commercial development, and 500,000 square feet of hotel use proposed for the Specific Plan would occur outside of the Baylands within San Francisco and San Mateo County.

related to VMT reduction and building decarbonization CARB 2022 Climate Change Scoping Plan.

- Baylands development would be consistent with most performance metrics contained in the BAAQMD's CEQA Guidelines.
    - Natural gas service would not be extended to any new residential or nonresidential development.[12] The Specific Plan commits to operating with 100 percent renewable energy along with all electric buildings, a minimum of 85,000 MWh of on-site renewable energy generation, and 30 MW of distributed battery storage.
    - As documented in Section 4.11, *Energy Resources*, Baylands development would not result in wasteful, inefficient, or unnecessary energy usage.
    - As documented in Section 4.8, *Transportation*, the Specific Plan would, with implementation of required transportation demand management programs result in per capita VMT for Baylands residents and employees more than 35 percent below the nine-county regional average for the Bay Area and reduce regional vehicle miles traveled consistent with achieving state-wide GHG reduction goals.

While not necessarily meeting CALGreen Tier 2 electric vehicle EV requirements, the Specific Plan would provide a total of 6,924 parking spaces of the total maximum 11,000 parking spaces permitted by the Specific Plan with EV charging infrastructure.

Mitigation Measures

Revisions to the Specific Plan required by Mitigation Measure MM LUP-2 would ensure consistency with MTC's Resolution 4530 by requiring:

- Residential development within ½ mile of the Caltrain Bayshore Station shall average a minimum of 25 dwelling units per acre as measured on a block-by-block basis;
- Decrease the maximum per unit parking ratio for Multi-Family Low, Townhome, and Duplex/Single Family housing types shall be reduced from 1.25 to 1.0 spaces per unit; and
- Require commercial office development within ½ mile of the Caltrain Bayshore Station to have an average minimum FAR of 2.0 as measured on a block-by-block basis.

[12] Existing uses that currently use natural gas and would remain at their current locations would be permitted to retain natural gas service.

Mitigation Measure MM AQ-1k requires that the applicant for development shall demonstrate compliance with the most current California Green Building Standards (CALGreen Code) Tier 2 voluntary electric vehicle (EV) charging requirements.

Mitigation Measure MM AQ-1k requires on-site development to comply with CALGreen Code Tier 2 vehicle charging standards within the Baylands. These energy-saving project elements would substantially reduce energy consumption compared to existing mixed land use developments throughout the region. Many of these energy benefits are not accounted for in the quantitative analysis provided with respect to Impact GHG-1.

i. Energy Resources

Impact EN-1: Consumption of Energy Resources in a Wasteful, Inefficient, or Unnecessary Way

Less than Significant

Construction

Compliance with existing State regulations to minimize fuel use would ensure that Project construction activities requiring the use of fossil fuels would not be wasteful, inefficient, or unnecessary. Moreover, Baylands construction would not be expected to result in demand for energy greater on a per-unit-of-development basis than other development projects in the region, with the exception of the necessary grading that is required to return the Baylands to a safe and healthy condition and provide adequate protection from flooding and projected sea level rise. Therefore, Specific Plan construction would not result in the wasteful, inefficient, or unnecessary consumption of energy. While mitigation for energy construction impacts is not required, air quality mitigation measures MM AQ-1a, MM AQ-1c, and MM AQ-1i would further reduce energy consumption during Baylands construction.

Operations

The Specific Plan is designed to be an energy efficient development by including a suite of sustainability features including LEED Gold buildings, all-electric buildings, electric vehicle charging, on-site solar powered infrastructure systems, distributed and utility-scale Battery Storage systems, on-site bicycle and pedestrian trails connecting to off-site trails, and TDM Plans to reduce mobile fuel use. In addition, transportation demand management programs would be implemented to reduce per capita vehicle miles traveled by Baylands residents and employees by more than 30 percent below the existing regional baseline VMT. The Specific Plan provides for buildings to be designed to be LEED Gold or GreenPoint Rated (based on 2022 rating criteria for LEED and GreenPoint), and residential and non-residential buildings within the Specific Plan area would comply with CALGreen Tier 1 voluntary standards.

Ultimately, Baylands development would have lower per capita energy consumption compared to the Bay Area region due to:

- The combination of the Specific Plan's mixed-use character, location adjacent to transit, provision of a comprehensive on-site trails system with connections to areawide and regional trails, and TDM programs would reduce per capita vehicle miles traveled (VMT) for Baylands residents and employees below the regional average and reduce regional VMT.
- With respect to EV charging, Baylands residential and commercial buildings would be constructed to meet the 2022 CALGreen Tier 1 Voluntary Building Energy Standards and the City's recently adopted Reach Code.
- On-site renewable generation and distributed battery storage would be far greater than is typical development throughout the Bay Area region.

Therefore, the project would not increase per-capita energy consumption in comparison to the regional baseline.

Baylands development would not increase reliance on fossil fuels or decrease reliance on renewable energy sources because:

- The relatively lower per capita VMT identified above would result in less per-capita fossil fuel consumption than is typical for the Bay Area.
- The project would include substantial on-site solar energy generation and on-site battery storage, thereby reducing the need for fossil-fuel-generated energy and actually increasing reliance on renewable energy.

Impact EN-2: Consistency with Applicable Programs, Plans, Ordinances, and Policies for Renewable Energy and Energy Efficiency

Less than Significant

The Baylands Specific Plan provides for transit-oriented mixed-use development within an area designated by *Plan Bay Area 2050* as a Priority Development Area and a Transit Priority Area and would provide substantial on-site energy generation; it would not conflict with *Plan Bay Area 2050*.

j. Noise and Vibration

Impact NOI-1: Temporary Increase in Ambient Noise Levels during Construction

Significant and Unavoidable

Some construction activities, such as concrete pours or other work to maintain safety or avoid traffic impacts, may require nighttime activity that could conflict with the City of Brisbane's ordinance limiting the hours and days allowed for construction work. Such nighttime activities would result in temporary noise level increases exceeding the quieter nighttime ambient noise levels by more than 10 dBA at any Baylands housing that might be occupied while construction activities are being undertaken for other Baylands development increments.

Noise generated by trucks hauling soil from the eastern to the western portion of the Baylands would cause an increase in noise by 5.4 to 12.2 dBA in four locations that have a current Ldn of greater than 60 dBA.

Pile driving activities within the western portion of the Baylands would increase daytime noise levels by 15 to 43 dBA in the 3 locations while pile driving within the eastern portion of the Baylands would increase daytime noise levels by 10 to 17.4 dBA in two locations. Building construction adjacent to an occupied dwelling unit within the Baylands would increase daytime noise levels by more than 10 dBA (+32 dBA).

Implementation of Mitigation Measures MM NOI-1a through MM NOI-1e would reduce construction noise to both off-site receptors and to occupied on-site receptors within the Baylands. However, building construction adjacent to occupied dwelling units within the Baylands and roadway noise increases along four roadway segments would still remain significant and unavoidable because of the proximity of receptors and unavailability of feasible mitigation strategies. Additionally, construction noise impacts from installation of pile foundations would remain significant since site-specific geotechnical conditions may require impact pile driving as close as 50 feet to occupied residential uses within the Baylands and generate noise as great as 21 dBA above ambient in proximate offsite locations, exceeding the 10 dBA over existing ambient level standard. Construction noise impacts therefore would be significant and unavoidable with implementation of all feasible mitigation.

The geotechnical reports prepared for the western and eastern portions of the Baylands (ENGEO 2022) acknowledge that quieter methods of pile foundation installation are dependent on building design and site-specific geotechnical conditions, requiring recommendations for specific pile types and installation techniques to be provided based on design-level geotechnical reports for individual building sites. Thus, the potential for traditional impact pile driving and its associated noise levels over large portion of the site, including the potential for simultaneous impact pile driving to occur at different locations remain. Consequently, even with

implementation of noise reduction measures such as cushion blocks,[13] the potential for achieving the 16 dBA reduction necessary for construction noise to be below 10 dBA over existing ambient levels is unlikely, as barriers would need to be of substantial height to block the line of sight from proposed residential buildings that could be up to 50 feet in height. Therefore, given that foundation construction for Phase 1 development would occur over a 10-year period and could likely involve some degree of impact pile driving, including simultaneous pile driving at different locations, even with identified mitigation measures, this impact would be significant and unavoidable.

Program EIR Mitigation Measures

MM NOI-1a: Construction Noise Control (Program EIR Mitigation Measure 4.J-4a). All applicants for site-specific development within the Baylands shall implement site-specific noise attenuation measures during all construction- related activities under the supervision of a qualified acoustical consultant as a pre-requisite to issuance of site grading(s). These measures shall be included in a Noise Control Plan that shall be submitted for review and approval by the City of Brisbane Building Department to ensure that construction noise does not exceed the standards set forth in the City's Noise Ordinance. These attenuation measures shall include all or any combination of the following control strategies:

- Limit construction activities to between 7:00 a.m. and 7:00 p.m. Monday through Friday and between 9:00 a.m. and 7:00 p.m. on weekends and holidays;
- Pile driving and/or other extreme noise- generating activities (Lmax greater than 90 dBA) would be limited to between 8:00 a.m. and 4:00 p.m. Monday through Friday, with no extreme noise-generating activity permitted between 12:30 p.m. and 1:30 p.m. No extreme noise-generating activities would be allowed on weekends and holidays;
- Equipment and trucks used for construction shall use the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds;
- Impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for construction shall be hydraulically or electrically powered wherever possible to avoid noise associated with compressed air exhaust from pneumatically powered tools. Where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be

[13] To reduce noise from impact pile driving, a "cushion," typically made of wood, is placed between the hammer and the pile.

used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves shall be used where feasible; this could achieve a reduction of 5 dBA. Quieter procedures, such as use of drills rather than impact tools, shall be used;

- Stationary noise sources shall be located as far as possible from adjacent receptors, and they shall be muffled and enclosed within temporary sheds, incorporate insulation barriers, or include other measures;
- Erect temporary plywood noise barriers around the construction site when adjacent occupied sensitive land uses are present within 75 feet;
- Implement "quiet" pile-driving technology (such as pre-drilling of piles and the use of more than one pile driver to shorten the total pile driving duration), where feasible, in consideration of geotechnical and structural requirements and conditions;
- Use noise control blankets on building structures as buildings are erected to reduce noise emission from the site; and
- Use cushion blocks to dampen impact noise.

MM NOI-1b: Noise complaint response and monitoring (Program EIR Mitigation Measure 4.J-4b). Prior to City issuance of grading permits, applicants for site-specific development projects shall submit to the Brisbane Community Development Department a list of measures that will be undertaken to respond to and track complaints pertaining to construction noise, including:

- A procedure for notifying the City staff of complaints;
- A plan for posting on-site signs pertaining to permitted construction days and hours, complaint procedures, and the contact person who should be notified in the event of a problem;
- A listing of telephone numbers (during regular construction hours and off-hours);
- Designation of an on-site construction complaint manager;
- Notification of neighbors within 300 feet of the construction area about the estimated duration of pile driving activity at least 30 days in advance of the activity; and
- A preconstruction meeting with the job inspectors and the general contractor/on-site project manager to confirm that noise mitigation and practices (including construction hours, neighborhood notification, posted signs, etc.) are completed.

Additional Mitigation Measures

MM NOI-1c: Construction Hours along existing Roadways and for Concrete Pours. Approval of an exception permit pursuant to the provisions of Brisbane Municipal Code Section 8.28.080 shall be required for any activities where daytime construction activities would cause substantial traffic congestion or safety hazards such as construction along existing roadways and for required nighttime concrete pours. Exception permits for these nighttime construction activities shall be conditioned to provide for a minimal duration of nighttime construction and identify detailed methods to be employed to minimize noise during any such required nighttime construction.

MM NOI-1d: Document measures to achieve noise performance standards. Prior to issuance of (1) a demolition permit, (2) a grading permit for the mass movement of soil from the eastern to the western portion of the Baylands, (3) a grading or building permit for a site-specific development project, or (4) a permit for infrastructure construction, the applicant shall have a Construction Noise Control Plan prepared by a qualified acoustical consultant to identify the specific measures to be implemented to ensure at least one of the following performance standards set forth in Brisbane Municipal Code Chapter 18.28 are achieved:

- No individual piece. of equipment shall produce a noise level exceeding 83 dBA at a distance of 25 feet from the source thereof, unless an exception permit pursuant to Brisbane Municipal Code Section 8.280.080 is acquired from the City of Brisbane.
- The noise level at any point outside of the property plane of the project shall not exceed 86 dBA.

The Construction Noise Control Plan shall be submitted to the City of Brisbane Community Development Department for review and approval prior to permit issuance.

Where applicable to the permit being requested, each of the following measures shall be implemented as requirements of the requested permit to achieve the above performance standards:

1. **Construction Site Perimeter Barrier.** To reduce noise levels for work adjacent to residences, schools, or other noise-sensitive land uses, a noise barrier(s) shall be constructed along the edge of the work site facing the receptor(s). Barriers shall be constructed either with two layers of 0.5-inch-thick plywood (joints staggered) and K-rail or other support, or with a limp mass barrier material weighing 2 pounds per square foot. If

commercial barriers are employed, such barriers shall be constructed of materials with a Sound Transmission Class (STC) rating of 25 or greater.

2. **Stationary-Source Equipment Placement.** Stationary noise sources, such as generators and air compressors, shall be located as far from adjacent properties as possible. These noise sources shall be muffled and enclosed within temporary sheds, shall incorporate insulation barriers, or shall use other measures as determined by the Community Development Director to provide equivalent noise reduction.
3. **Stationary-Source Equipment Local Barriers.** For stationary equipment, such as generators and air compressors that will operate for more than one week within 500 feet of a noise-sensitive land use, the construction contractor shall provide additional localized barriers around such stationary equipment that block the line of sight[14] to neighboring properties.
4. **Temporary Power.** Temporary power poles instead of on-site generators shall be used wherever feasible.
5. **Construction Equipment and Haul Trucks.** Equipment and trucks used for soil loading, transport, unloading, grading, and deep dynamic compaction shall use the best commercially available noise control features (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds). Exhaust mufflers shall be provided on pneumatic tools when in operation for more than one week within 500 feet of noise-sensitive land use. All equipment shall be properly maintained.
6. **Impact Tool Use.** The Construction Noise Control Plan shall incorporate measures to reduce the use of heavy impact tools and locate use of such tools away from the property line to the extent feasible. Impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for demolition and construction shall be hydraulically or electrically powered wherever possible to avoid noise associated with compressed air exhaust from pneumatically powered tools. Where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used.[15] External jackets on the tools themselves shall be used where

[14] If a noise barrier does not block the line of sight between the noise source and the receptor, the barrier will provide little or no attenuation.

[15] This type of muffler can lower noise levels from the exhaust by up to about 10 dBA.

feasible.[16] Quieter procedures, such as use of drills rather than impact tools, shall be used.

7. **Truck Traffic Restrictions.** Truck idling shall be restricted to no more than two consecutive minutes per trip end. Trucks shall load and unload materials within approved construction or staging areas, rather than idling or loading/unloading on local streets. If truck staging is required, the staging area shall be located along major roadways with higher traffic noise levels or away from the noise-sensitive receptors, where such locations are available.
8. **Noise Control Blankets.** Where feasible, noise control blankets shall be used on building structures to reduce noise emission from the construction site.

MM NOI-1e: Installation of Pile Foundations. Impact pile driving shall be prohibited for any building within the Baylands unless a site-specific geotechnical study along with any test borings recommended by that study demonstrate that geologic or other unique conditions exist that preclude the use of quieter, alternative pile installation techniques such as, but not limited to:

- "Press-in" method of pile driving such as the Giken Silent Pile Driver[17]
- Piles that could be pre-drilled for auger-cast or micro pile foundation installation
- Vibratory pile driving where press-in or pre-drilled pile installation is infeasible

Where no alternative to impact pile driving is available, noise mitigation at the site of the pile driving such as, but not limited to baffles, echo barriers, cushion blocks, or other methods shall be implemented to ensure that noise from the impact of the pile driving hammer is minimized to achieve compliance with the performance standards set forth in Brisbane Municipal Code Chapter 18.28.[18]

[16] External jackets on tools could achieve a reduction of 5 dBA.

[17] The Giken Silent Pile Driver is capable of generating reduced noise levels of approximately 64 dBA at 16 meters (Giken Ltd. 2024).

[18] Such barriers can be installed immediately adjacent to the pile lead itself and reduce noise by as much as 30 dBA.

Impact NOI-2: Permanent Increase in Ambient Noise Levels from Stationary Sources

Significant and Unavoidable

Specific Plan requirements for screening of HVAC units do not provide specific provisions that would ensure compliance with applicable thresholds for sensitive receptors in Brisbane (Section 8.26.030 of the Municipal Code) and San Francisco (Section 2909 of the Police Code). Thus, HVAC units could exceed applicable noise ordinance requirements. Even if each HVAC unit within the Specific Plan area would meet applicable noise standards and depending on the location and screening provided for individual units, the aggregate noise from multiple HVAC units operating simultaneously could be more than 10 dB over ambient noise levels.

Noise increases from commercial heavy/medium-duty truck deliveries would be more than 5 dBA where the existing noise level is 59 dB L_{eq} or less at 50 feet away, which could occur during early morning deliveries in nighttime hours (before 7:00 a.m.). The Specific Plan does not contain requirements that would ensure loading docks are sited such that the building acts as a barrier from noise for adjacent noise-sensitive land uses or by provision of noise barriers or limits on delivery times and access routes, potentially allowing noise from loading activities to exceed applicable noise standards.

While the Baylands water recycling facility would provide noise control feature, the facility's design is conceptual. In the absence of design specifications, a quantitative demonstration that the facility would meet applicable noise standards is not possible and it must be assumed that noise levels from operations would exceed applicable thresholds.

Noise increases from battery storage systems which could be located as close as 150 feet to Baylands high-density residential uses within the Roundhouse District, would generate noise that could increase ambient noise levels in excess of 5 dBA.

Temporary events employing amplified sound within park areas could be as close as 50 feet to the low-density residential units and increase ambient noise levels by more than 5 dBA.

Mitigation Measures NOI-2a through NOI-2f would be sufficient to achieve operation of individual stationary sources to be consistent with the noise standards of Brisbane Municipal Code Sections 8.28.030, 8.28.040, and 8.28.050. However, ensuring that resultant noise levels could be maintained less than 5 dBA above ambient levels is not reasonably feasible given that (1) each given receptor would need a baseline measurement in a noise environment with multiple sources; (2) the noise environment would be constantly changing due to other noise sources as the Specific Plan develops; and, (3) construction activities would hinder establishment of baseline noise levels within the Specific Plan area for many years.

Program EIR Mitigation Measures

MM NOI-2a: Project Design Features (Program EIR Mitigation Measure 4.J-3a). All development within the Baylands shall incorporate the following design features into the final site plans prior to issuance of a building permit:

- Building equipment (e.g., heating, ventilation, and air conditioning units) shall be located away from nearby residences, on building rooftops, or adequately shielded within an enclosure that effectively blocks the line of sight of the source from receivers in order to meet a performance standard of 5 dBA over existing ambient noise levels (generally perceptible increase to most persons) for this source which would potentially operate more than 20 minutes in a given hour.
- Designated truck delivery areas (e.g., loading bays) shall be located at least 100 feet from residences to maintain noise levels of less than 5 dBA over existing monitored levels, except within mixed-use buildings containing both residential and commercial uses. Truck delivery bays and waste collection areas shall be located so that they are blocked by Project buildings or designed with noise reduction barriers to reduce noise impacts on residences or other sensitive receptors.
- Where truck delivery bays are provided within mixed-use buildings containing both residential and commercial uses, they shall be located and designed so as to minimize the effects of noise from loading activities on residential uses within the building.

Additional Mitigation Measures

MM NOI-2b: Compliance with Brisbane Municipal Code. Prior to the issuance of any building permit, the applicant shall demonstrate to the satisfaction of the Brisbane Community Development Director that all mechanical equipment is selected and designed to meet the performance standards of Sections 8.28.030 and 8.28.040 of the Brisbane Municipal Code and that the noise from building's mechanical equipment and to limit increasing noise levels more than 5 dBA L_{eq} above ambient at any sensitive receptor.

If projected noise levels from mechanical equipment would exceed 5 dBA Leq above ambient at any sensitive use or City standards, appropriate noise reduction measures shall be provided. Methods of achieving these standards include using low-noise-emitting HVAC equipment, locating HVAC and other mechanical equipment within a rooftop mechanical penthouse, and using shields and parapets to reduce noise levels sufficiently to meet the performance

standards of Sections 8.28.030 and 8.28.040 of the Brisbane Municipal Code at adjacent land uses.

For example, emergency generators would be required to include industrial-grade silencers that can reduce exhaust noise by 12 to 18 dBA or residential-grade silencers that can reduce such noise by 18 to 25 dBA as necessary. (ASHRAE 2006). Acoustical screening can also be applied to exterior noise sources of the proposed central utility plants and can achieve up to 15 dBA of noise reduction (ENC 2014).

An acoustical study shall be prepared by a qualified acoustical engineer during final building design to evaluate the noise generated by building mechanical equipment and to identify the necessary design measures (e.g., equipment selection, acoustical housing, or screening) to be incorporated to limit increased noise levels to no more than 5 dBA L_{eq} above ambient at any sensitive receptor and meet the City's Municipal Code noise standards. The study shall be submitted to the Brisbane Community Development Director for review and approval before the issuance of any building permit.

MM NOI-2c: Loading Dock Noise. Loading docks shall be located and designed so as to not increase noise levels more than 5 dBA L_{eq} above ambient at any sensitive receptor and meet the City's Municipal Code noise standards.

An acoustical study shall be prepared by a qualified acoustical engineer during final building design to identify the necessary design measures (e.g., loading dock location, acoustical barriers) to be incorporated and demonstrate that loading docks will meet the City's Municipal Code noise standards and not increase noise levels more than 5 dBA L_{eq} above ambient at any sensitive receptor. The study shall be submitted to the Brisbane Community Development Director for review and approval before the issuance of any building permit.

Potential design measures that could be implemented to achieve this performance standard (the City's Municipal Code noise standards) may include, but are not limited to shielding from features integrated into site design, and/or restrictions on hours for commercial deliveries within the commercial mixed-use areas. Such measures shall be determined by the site-specific noise impact study that addresses commercial mixed-use truck delivery activities, completed by a qualified noise consultant once site-specific development plans are completed, but must be designed to achieve the performance standards in Brisbane Municipal Code Sections 8.28.030 and 8.28.040.

MM NOI-2d: Water Recycling Facility Noise. The Baylands water recycling facility shall be designed to limit noise to no more than 5 dBA above ambient at any sensitive

receptor and meet the performance standards of Brisbane Municipal Code Sections 8.28.030 and 8.28.040. Available measures shall be incorporated into the facility's design to meet applicable noise standards, such as locating mechanical equipment within a mechanical penthouse, using shields and parapets to reduce noise levels at nearby land uses, and additional measures such as those provided below in **Table 4.12-36** as required to limit noise to no more than 5 dBA above ambient at any sensitive receptor and meet the performance standards of Brisbane Municipal Code Sections 8.28.030 and 8.28.040.

Table 4.12-36: Major Water Recycling Facility Treatment Process Equipment and Available Noise Mitigation Methods

Noise Source	Potential Noise Reduction Methods
Effluent Pumps	Motor room absorptive surface treatments Acoustic louvers Ventilation duct silencers
Aeration Blowers	Acoustic louvers Ventilation duct silencers Blower inlet silencers Blower vent silencers
Influent and Bypass Pumps Stations	Pump room absorptive surface treatments Acoustic louvers Ventilation duct silencers
Back-Up Generator	Industrial-grade silencers
Odor Control Exhaust Fans	Fan room absorptive surface treatments Acoustic louvers Ventilation duct silencers Sound-rated fan selection and specification Fan duct silencers

SOURCE: Environmental Science Associates, 2024.

An acoustical study shall be prepared by a qualified acoustical engineer during final building design to evaluate the noise generated by building mechanical equipment and to identify the necessary design measures to be incorporated to meet the City's standards of Brisbane Municipal Code Sections 8.28.030 and 8.28.040. The study shall be submitted to the Brisbane Community Development Director or the Director's designee for review and approval before the issuance of any building permit.

MM NOI-2e: Utility-Scale Battery Storage Facility. Battery storage facilities shall be designed to limit noise to no more than 5 dBA above ambient at any sensitive receptor and meet the performance standards of Brisbane Municipal Code Sections 8.28.030 and 8.28.040. Potential design measures that could be implemented to achieve this performance standard (the City's Municipal Code noise standards) may

include but are not limited to, using distributed inverter system design, selection of quiet cooling systems and acoustical shielding for inverters and cooling equipment. Such measures shall be determined by the site-specific noise impact study completed by a qualified noise consultant once site-specific development plans are completed but must be designed to achieve the performance standards in Brisbane Municipal Code Sections 8.28.030 and 8.28.040.

MM NOI-2f: **Amplified Sound.** The applicant or operator of all amplified music events within public parks shall prepare and implement a Noise Control Plan for operations at the proposed entertainment venues to reduce the potential for noise impacts from public address and/or amplified music. This Noise Control Plan shall contain the following elements:

- All activities held at the community event area consisting of amplified speech or music shall be limited to daytime hours of 7 am to 10 pm.
- Amplified speech or music levels shall be maintained at or below the performance standard of fifteen (15) dBA above the local ambient to any receiver (Brisbane Municipal Code Sections 8.28.070).

Impact NOI-3: Permanent Increase in Ambient Noise Levels along Roadways

Significant and Unavoidable

One of the 15 roadways segments that were analyzed would exceed applicable thresholds in 2035, and three of the 15 roadway segments would exceed applicable thresholds in 2040.

Potential mitigation strategies are limited and not feasible for all roadways, or in the case of Geneva Avenue and Tunnel Avenue, would be in the purview of other jurisdictions. However, these measures are identified as a menu of available measures to mitigate traffic noise impacts to the extent feasible. As such, it cannot be assured that these measures could be implemented to the degree sufficient to reduce impacts to a less-than-significant level.

Mitigation Measure MM NOI-3 is proposed; however, the degree to which it could feasibly be implemented to reduce traffic noise to a less than significant level cannot be assured.

Mitigation Measures

MM NOI-3: **Traffic Noise Reduction Measures:** Each of the following traffic noise reduction measures that are determined by the Brisbane City Engineer or the Daly City or San Francisco City Engineer for physical improvements along roadway segments in those cities to be feasible shall be implemented to reduce the projected roadway noise increases along (1) Geneva Avenue from Carter Street to Bayshore Boulevard, (2) Tunnel Avenue from Blanken Avenue to north of Beatty Road,

and (3) Guadalupe Canyon Parkway west of North Hill Drive by an estimated 0.1 to 0.8 dBA for each measure.

- **Reduction in Traffic Volumes:** Because one of the primary components of traffic noise generation is daily vehicle volume, a reduction in traffic noise levels would result from reducing the overall volume of Baylands-generated traffic. However, achieving a 3 dB reduction in traffic noise levels would require a 50 percent reduction in projected traffic volumes. As the increase in noise along Guadalupe Canyon Parkway is predicted to be 3.2 dBA over the applicable significance criterion of a 1.5 dBA increase (4.7 dBA total increase), an almost 50 percent reduction in the Baylands traffic volume contribution would be necessary to achieve a less than significant roadway noise increase.

  Specific Plan development already includes implementation of a Transportation Demand Management (TDM) program to encourage and create incentives for travel other than via use of single-occupant vehicle trips, in accordance with Brisbane ordinance and San Mateo County's Congestion Management Program requirements. The trip reductions attributable to required implementation of TDM measures are already reflected in the traffic volumes in the transportation analysis that was used to estimate roadway noise increases in Tables **Table 4.12-37** and **Table 4.12-38**.

- **Reduction in Vehicle Speeds:** Another factor in the generation of traffic noise is vehicle speed. Higher speeds translate to higher traffic noise levels. Each 5-mph reduction in average speed provides approximately 1.4 dBA of noise reduction on an average basis (L_{eq}/DNL). Speed reductions may be achieved by posting new speed limits or through installation of traffic calming infrastructure such as roundabouts. However, vehicle speed limits are set based on speed surveys, safety considerations, and other factors, rather than achieving lower traffic noise levels. In addition, the City and County of San Francisco has jurisdiction over portions of affected roadways within San Francisco (the northern portions of Bayshore Boulevard and Tunnel Avenue). As a result, implementation of this measure could only be assured if speed surveys and safety studies demonstrated the feasibility of reducing speed limits.

- **Construction of Noise Barriers:** Reductions in traffic noise levels can be achieved through the construction of traffic noise barriers. However, at locations where openings or gaps in the barriers would be required for driveway openings or to maintain safe sight distances, the effectiveness of noise barriers would be severely compromised. In addition, this measure

would typically require construction of noise barriers on the property of the impacted receptor, rather than within a public right-of-way, so there is no guarantee the impacted receptor would agree to the construction of such barriers. Therefore, barriers are generally, not an available means of mitigation.

- **Acoustical Treatments for Existing Impacted Residences:** Sound insulation treatments, such as replacing existing windows and doors with sound-rated windows and doors and providing a suitable form of forced-air mechanical ventilation, can reduce indoor noise levels sufficient to achieve an interior noise level of 45 dBA DNL, as recommended for interior residential spaces. This measure would typically require construction of replacement doors and windows on the property of the impacted receptor, rather than within a public right-of-way, so there is no guarantee the impacted receptor would agree to the construction of such improvements. Therefore, implementation of the measure cannot be assured.
- **Use of Setbacks:** A 4.5 dBA decrease in traffic noise levels can be achieved for each doubling of distance between the roadway centerline and affected residences. However, because the locations of existing residences that would be impacted by Baylands-generated increases in traffic noise are fixed, as are the roadways of concern, this measure is not viable for the existing impacted residences.
- **Engineered Asphalt:** Noise-reducing pavement types, such as rubberized asphalt, have been shown to provide an appreciable noise level reduction relative to other pavement types. Studies have demonstrated these measures reduce traffic noise levels along local roadways by 3 to 5 dBA DNL. Engineered asphalt intended to reduce tire-pavement noise could potentially reduce noise levels along impacted roadways. This approach would consist of the replacement of dense grade asphalt with open-grade or rubberized asphalt. However, this approach is likely infeasible. The FHWA currently does not endorse the use of quiet asphalt as a noise abatement measure because the effectiveness of quiet paving declines as the pavement ages and will cease to serve its noise abatement function if

not properly maintained.[19] To be a permanent mitigation, subsequent repaving would also have to use "quieter" pavements. The working assumption for maintenance assumes replacement of the asphalt overlay to occur every 7 years as opposed to a 20-year cycle for ridged pavement (Caltrans 2018). The cost per mile is approximately 26 percent more than for Portland cement with standard asphalt (Institute of Noise Control Engineering 2014).

Impact NOI-4: Exposure of People to Railroad, Freeway, and Airport Noise

Less than Significant with Mitigation Incorporated

Residential and hotel development adjacent to the west side of the Caltrain right-of-way would exacerbate the noise impacts of rail operations by exposing residents and hotel guests to DNL noise levels in excess of 65 dBA.

The Baylands is located outside the 65 dB CNEL noise contour of SFO airport operations. In addition, proposed residential and hotel uses are proposed to be located a sufficient distance from the freeway that residents and hotel guests would not be subject to DNL noise levels in excess of 65 dBA.

Implementation of Mitigation Measures MM NOI-4a and NOI-4b would require residential, hotel, and other uses where people normally sleep to be designed to maintain an interior Day Night Noise Level (DNL) no greater than 45 dBA and outdoor common areas to a 65 dBA DNL, Baylands residents would be adequately protected from noise generated by rail operations within the Caltrain right-of-way. As a result, Baylands development would not exacerbate the noise impacts of railroad-generated noise by placing noise-sensitive uses close to the Caltrain right-of-way.

Program EIR Mitigation Measures

MM NOI-4a: Residential Exposure to Railroad Noise (Program EIR Mitigation Measure 4.J-1a). All residential development within the Specific Plan area shall minimize the exposure of people within the Specific Plan area to noise from Caltrain and High-

[19] The FHWA does not recognize special wearing surfaces as a noise abatement measure under 23 CFR 772 Procedures for Abatement of Highway Traffic Noise and Construction Noise. The noise reduction properties degrade as traffic loads wear these surfaces out over time, resulting in the abatement measure no longer fulfilling its intended abatement commitment and the surface requiring replacement. Replacement with standard pavement would in turn be a potentially substantial adverse environmental effect. Ensuring similar continuing performance for a quiet pavement abatement technique would require regular testing, because the acoustical benefits may deteriorate; also required is the agency's commitment, backed by funding, to maintain the acoustical properties of the pavement in perpetuity.

Speed Rail operations through construction of noise barriers or maintenance of buffer distances, and shall adhere to the following noise performance standards:

- Exterior noise level of below 65 dBA, DNL for outdoor common areas within any approved residential use; and
- Interior noise standard of 45 dBA, DNL.

These noise levels shall be attained through use of appropriate building materials as required by State of California Title 24 standards. Compliance with these performance standards shall be verified by an acoustical professional prior to issuance of a building permit. Specific measures to achieve these performance standards shall include all or any combination of the following options:

- Site design measures, including use of building orientation to minimize window exposure toward noise sources, avoid placing balcony areas in high noise areas, and use of buildings as noise barriers.
- Use of acoustically rated building materials (insulation and windows);
- Construction of architectural noise barriers between sources and receptors; and
- Provision of landscaping or other non-noise-sensitive buffer zones between sources and receptors.

MM NOI-4b: Hotel Exposure to Railroad Noise (Program EIR Mitigation Measure 4.J-1b). All hotel projects within the Specific Plan area shall minimize the exposure of people within the Specific Plan area to noise from Caltrain and High Speed Rail operations through construction of noise barriers or maintenance of buffer distances, and shall adhere to the following noise performance standards:

- Exterior noise level of below 65 dBA, DNL for outdoor common areas within any approved residential use or hotel; and
- Interior noise standard of 45 dBA, DNL

These noise levels shall be attained through use of appropriate building materials as required by state of California Title 24 standards. Compliance with these performance standards shall be verified by an acoustical professional prior to issuance of a building permit. Specific measures to achieve these performance standards shall include all or any combination of the following options:

- Site design measures, including use of building orientation to minimize window exposure toward noise sources, avoid placing balcony areas in high noise areas, and use of buildings as noise barriers;

- Use of acoustically rated building materials (insulation and windows);
- Construction of architectural noise barriers between sources and receptors; and
- Provision of landscaping or other non-noise-sensitive buffer zones between sources and receptors.

Impact NOI-5: Temporary or Permanent Increase in Vibration

Less than Significant with Mitigation Incorporated

Although existing off-site structures would not experience Baylands-generated vibration exceeding applicable thresholds, building construction in the early increments of Baylands development would be subject to vibration levels above the applied human annoyance criterion of 72 VdB (0.016 in/sec PPV) or the building damage threshold for modern structures of 0.5 in/sec PPV in the following locations:

- Icehouse Hill District, where pile driving for buildings would expose previously constructed Baylands buildings as close as 40 feet to a vibration level of 0.321 in/sec PPV, above the applied human annoyance criterion of 72 VdB (0.016 in/sec PPV) but below the building damage threshold for modern structures of 0.5 in/sec PPV.
- Roundhouse District, where pile driving would expose previously constructed Baylands buildings as close as 30 feet to a vibration level of 0.494 in/sec PPV, well above the applied human annoyance threshold for residential uses 72 VdB (0.016 in/sec PPV) but just below the building damage threshold for modern construction. Pile driving could occur as close as 300 feet to the reconstructed Roundhouse, which would experience a resultant vibration level of 0.02 PPV. This predicted vibration level would be below the 0.25 in/sec PPV criteria for historic structures.
- Bayshore District, where pile driving would expose previously constructed Baylands buildings as close as 30 feet to a vibration level of 0.494 in/sec PPV, well above the applied human annoyance threshold for residential uses 72 VdB (0.016 in/sec PPV) but just below the building damage threshold for modern construction of 0.50 in/sec PPV.
- Campus East District, where pile driving would expose previously constructed Baylands buildings as close as 25 feet south of the construction of low-density commercial buildings to a vibration level of more than 0.65 in/sec PPV, well above both the applied human annoyance threshold of 72 VdB (0.016 in/sec PPV) and the building damage threshold of 0.50 in/sec PPV.
- Pile driving activities within 8 feet of Kinder Morgan pipelines would generate sufficient vibration to damage the pipeline. Pile driving within 5 feet of underground pipelines or other underground structures could exceed the 10.0 in/sec PPV criterion.

Mitigation Measures MM NOI-5a and MM NOI-5b would reduce significant impacts related to building damage to the Roundhouse or the Machinery & Equipment building and historic structures to a less-than-significant level by requiring preconstruction surveys, monitoring, and provisions for repairing damage.

Mitigation Measure NOI-5c addresses residual impacts associated with potential damage to non-historic structures and human annoyance impacts. This measure would require the preparation and implementation of a Master Construction Vibration Avoidance and Reduction Plan that would ensure vibration levels from impact or vibratory pile driving within the Baylands would not exceed the following standards:

- 72 VdB (0.02 in/sec PPV) at the nearest occupied housing, which is the applied human annoyance threshold for residential uses: or
- 0.5 in/sec PPV) at the nearest occupied structure, which represents the building damage threshold for modern construction.

Program EIR Mitigation Measures

MM NOI-5a: Pre-Construction Assessment to Minimize Structural Pile-Driving Vibration Impacts on Adjacent Historic Buildings and Structures and Vibration Monitoring (Program EIR Mitigation Measure 4.J-2b). Any development within 85 feet of the Roundhouse and the Machinery & Equipment Building that would require pile driving or other construction techniques that could result in vibrations of 0.25 in/sec shall engage a qualified geotechnical engineer subject to City approval to conduct a pre-construction assessment of existing subsurface conditions and the structural integrity of the nearby historic structures subject to piledriving or other vibration-inducing activity before a building permit is issued to demonstrate that the proposed construction activities would not result in vibration-induced damage to the Roundhouse or the Machinery & Equipment building.

If recommended by the pre-construction assessment, groundborne vibration monitoring of nearby historic structures shall be required. Such methods and technologies shall be based on the specific conditions at the construction site such as, but not limited to, the pre-construction surveying of potentially affected historic structures and underpinning of foundations of potentially affected structures, as necessary. The pre-construction assessment shall include a monitoring program to detect ground settlement or lateral movement of structures in the vicinity of pile-driving activities. Monitoring shall be maintained while construction occurs within 85 feet of historic structures, and results shall be submitted to the City Engineer. In the event of unacceptable ground with the potential to cause structural damage movement (in excess of

0.25 in/sec PPV at historic structures), as determined by the City Engineer, all impact work shall cease until corrective measures (e.g., installation of vibration wave barriers) are implemented to reduce ground movement to below 0.25 inches PPV.

In addition, the following measure shall be implemented:

- Evaluate and implement feasible measures for reducing vibration, such as alternative pile driving methods (e.g., cast-in-drilled-hole piles versus driven piles), alternative foundation types for the new construction (e.g., spread footings versus driven piles), alternative compaction methods, and physical measures (intervening trench, increased distance).
- Require monitoring to be conducted at the building during construction. This monitoring can include crack gages on existing cracks and vibration amplitude monitoring. Establish warning and stop work thresholds for monitoring. Implement visual and audible signals that are triggered by a vibration monitor when exceedances of warning and stop work thresholds occur. If warning thresholds are exceeded routinely, consider alternative construction approaches.
- If the stop work threshold is exceeded, evaluate the condition of the building for damage. If no damage is indicated consult with structural engineer and/or architectural historian to assess whether higher thresholds are possible and adjust as appropriate.
- If damage occurs, determine if any other construction approaches are feasible to reduce vibration. If none is available examine the severity of the damage to determine if damage is minor and repair is feasible. If repair is feasible continue with construction but monitor vibration and damage closely to ensure that damage remains repairable. Consider whether a lower stop work threshold is feasible.
- Repair any damage that has occurred.

MM NOI-5b: Protection of Underground Utilities (Program EIR Mitigation Measure 4.J-2c). All development sites requiring pile driving shall have underground utility[20] surveys completed before an application for a building permit is submitted to demonstrate that pile driving will be located a minimum 15 feet from buried utilities. All pile driving shall be designed so as to result in peak particle velocity of less than 4.0 in/sec (100 mm/s) at the location of underground utilities.

[20] Underground utilities include electrical lines, irrigation lines, reclaimed water lines, municipal water lines, sewer lines, gravity flow facilities (storm, sanitary and laterals), cable/ communication lines and gas lines.

Within one week following completion of pile driving activities, a post-construction assessment of all underground utilities within 30 feet of the pile driving activity shall be submitted to the City by the contractor, confirming that no damage to any underground utilities occurred as the result of the pile driving activity. Should the post-construction assessment determine that underground utilities were damaged by pile driving activities, such damage shall be repaired by the contractor to the satisfaction of the City and affected utility.

Additional Mitigation Measure

MM NOI-5c: Vibration Control. Any impact pile driving that is permitted per Mitigation Measure MM NOI-1f after having demonstrated via a site-specific geotechnical study along with any test borings that geologic or other unique conditions preclude the use of quieter, alternative pile installation techniques shall be subject to the following requirements.

Each site-specific development and infrastructure project that would occur within 75 feet of a conventionally constructed building shall implement sufficient measures so as to ensure vibration from impact or vibratory pile driving would not exceed 0.5 in/sec PPV at the nearest structure or 72 VdB (0.016 in/sec PPV) at the nearest occupied residential structure.

Prior to the issuance of a building permit or construction permit, the applicant shall prepare a Construction Vibration Avoidance and Reduction Plan to identify the specific measures to be implemented to achieve the above performance standard. The plan shall be submitted to the Community Development Director for review and approval, and include, at a minimum, the following vibration avoidance and reduction measures:

- Neighbors within 500 feet of the construction site shall be notified of the construction schedule and that noticeable vibration levels could result from pile driving.
- Vibration levels and/or impacts from pile driving shall be minimized by instituting as many of the following measures as necessary to reduce the potential impacts from pile driving to meet the performance standards identified above:
    - Tower buildings requiring pile driving shall be constructed during the initial phases of construction for a given neighborhood to avoid annoyance vibration impacts on other occupied residential buildings within the neighborhood.

  - Foundation pile holes shall be pre-drilled to minimize the number of impacts required to seat the pile.
  - Piles shall be jetted or partially jetted into place to minimize the number of impacts required to seat the piles.

- The pre-construction survey of underground utility lines required by Mitigation Measure MM NOI-5b shall be conducted within a radius of 100 feet of the construction site. All pile installation locations shall be located no closer than 8 feet to existing utility easements containing underground cables, pipelines, or fuel lines associated with the Kinder Morgan Tank Farm.

  Additionally, construction vibration monitoring shall be implemented to document conditions before, during, and after pile driving within 30 feet of a modern structure, within 50 feet of a historic structure, or within 8 feet of a utility line right-of-way or easement. All monitoring tasks shall be undertaken under the direction of a licensed Professional Structural Engineer in the State of California (and a Historic Architect if the affected structures are historic resources) and shall be in accordance with industry-accepted standard methods. Construction vibration monitoring shall include the following tasks:

  - Identify the sensitivity of nearby structures to groundborne vibration. Perform a pre-construction photo survey, elevation survey, and crack monitoring survey for each of these structures. Surveys shall be performed before any pile driving activity, at regular intervals during pile driving, and after completion. The surveys shall include internal and external crack monitoring in structures, settlement, and distress, and shall document the condition of foundations, walls, and other structural elements in the interior and exterior of the structures.
  - Develop a Contingency Plan. The plan shall identify structures where monitoring will be conducted, establish a vibration monitoring schedule, define structure-specific vibration limits, and address the need to conduct photo, elevation, and crack surveys to document conditions before and after pile driving.
  - Should monitored vibration levels reach 0.47[21] in/sec PPV at buildings of conventional construction or 0.22 in/sec PPV at historic buildings, alternative construction techniques shall be used to minimize vibration levels during repaving activities where needed to meet vibration criteria. Such alternative construction techniques

[21] Identified trigger levels for cease-work reflect a vibration level 0.03 in/sec below the damage criteria.

include, but are not limited to, use of non-vibratory, excavator-mounted compaction wheels and small smooth drum rollers for final compaction of asphalt base and asphalt concrete, if within 50 feet of a historic structure or 25 feet of a conventionally constructed structure. If needed to meet compaction requirements, smaller vibratory rollers may also be used.

- If vibration levels reach 0.47 in/sec PPV at buildings of conventional construction or 0.22 in/sec PPV at historic buildings, suspend construction and implement alternative construction methods to either lower vibration levels or secure the affected structures.
- Conduct a post-construction survey on structures where either monitoring has indicated high levels or complaints have been received regarding damage. Where damage has resulted from construction activities, make appropriate repairs or provide compensation.
- Within one month after substantial completion of any building constructed with impact pile driving, summarize the results of all vibration monitoring in a report and submit the report for review by the Community Development Director or the Director's designee. The report shall describe measurement methods and equipment used, present calibration certificates, and include graphics as required to clearly identify the locations of vibration monitoring. An explanation of all events that exceeded vibration limits shall be included together with proper documentation supporting any such claims.
- Designate a person responsible for registering and investigating claims of excessive vibration. The contact information for such a person shall be clearly posted on the construction site.

Impact NOI-6: Exposure of People to High Vibration Levels

Less than Significant with Mitigation Incorporated

Development of housing and hotel uses proposed for the tower buildings in the Bayshore and Roundhouse Districts within 50 feet of adjacent to the Caltrain rail line would exacerbate the vibration impacts of Caltrain and other rail operations by exposing on-site residents and hotel guests to more than 70 rail operations generating 72 VdB or more.

Implementation of Mitigation Measure MM NOI-6 would ensure that groundborne vibration from rail operations would be less than the applicable threshold and thereby avoid exacerbating vibration impacts from rail operations on Baylands residential and hotel uses.

Program EIR Mitigation Measures

MM NOI-6: Exposure to Vibration from Rail Operations (Program EIR Mitigation Measure 4.J-2a). All development in the Baylands shall be designed to avoid vibration from Caltrain and other rail operations in excess of 72 VdB. Prior to issuance of any building permit for residential or hotel structures intended for human occupancy within 200 feet of the mainline track, a detailed vibration design study shall be completed by a qualified acoustical engineer to confirm ground vibration levels and frequency of operations along the Caltrain rail line and determine appropriate design that would limit interior vibration levels to less than 72 VdB within residences and hotel rooms. Implementation of the recommended measures of the acoustical study into project design elements shall be verified by the Brisbane Building Department as part of the plan-check process.

Specific measures to achieve the performance standard set forth above shall include all or any combination of the following methods:

- Use of vibration isolation techniques such as supporting the new building foundations on elastomer pads similar to bridge bearing pads;
- Installation of vibration wave barriers. Wave barriers would consist of control trenches or sheet piles, which are analogous to controlling noise with sound barrier. The applicability of this technique depends on the characteristics of the vibration waves.

k. Hazards and Hazardous Materials

Impact HAZ-1: Risks Involved in Transport, Use, Disposal, and Management of Hazardous Materials

Less than Significant with Mitigation Incorporated

Routine Transport, Use, Disposal, or Management of Hazardous Materials during Demolition and Construction Activities

A comprehensive set of federal, state, and local laws and regulations regulate the transportation, use, management, and disposal of hazardous materials and wastes to minimize potential risks of human and environmental exposure during site grading and construction of buildings, infrastructure, and site amenities, avoiding exposure of people and the environment. These programs also provide for training of workers to react to and contain accidental hazardous materials spills and other exposures to hazardous materials. In addition, the design and construction activities involved with undergrounding of electrical lines, installation of renewable energy generation and battery storage facilities, installation of service connections

and connections to the Martin Substation would comply with applicable codes, California Public Utilities Commission and Independent System Operator Rules and Regulations, and PG&E requirements. Thus, with the exception of lead within the former shooting range on Icehouse Hill, impacts would be less than significant. However, because clean-up of the former shooting range is addressed by EPA guidelines rather than mandatory requirements, exposure to lead within the former firing range would be significant and require mitigation.

Routine Transport, Use, Disposal, or Management of Hazardous Materials by Operation of Baylands Land Uses and Infrastructure

Proposed Baylands development would primarily consist of residential, commercial/office, public, and open space uses that would not transport, use, store, or dispose of large quantities of hazardous materials that could present a substantial risk to people. Uses such as hardware stores, laboratories, and the relocated fire station that would store hazardous materials in amounts greater than minimum reportable quantities would be required to prepare Hazardous Materials Business Plans tailored to their specific operations. These measures would reduce the potential for hazardous materials release during the routine transport, use, or disposal of such materials.

Consistency with Remedial Action Plans for Operable Units OU-SM and OU-2; Consistency with the Title 27 Landfill Closure Plan

Baylands development would be required to comply with the requirements of Remedial Action Plans for Operable Unit for OU-SM and Operable Unit OU-2, restricting human interaction with contaminated soils or groundwater. Construction of buildings and infrastructure within the eastern portion of the Baylands will also comply with applicable Title 27 Closure and Post-Closure Maintenance Plan requirements.

Upset or Accident Conditions

Grading and construction activities in the vicinity of Kinder Morgan pipelines includes the potential of accidental loading or undermining of soils covering and underlying the pipeline, causing damage to the pipeline. Because current grading and development plans do not include specific provisions for protecting the structural integrity of the pipeline, a significant impact would result from Baylands development.

Mitigation Measure MM HAZ-1a ensures implementation of General Plan policy requiring completion of site remediation and landfill closure prior to development within the Baylands. Mitigation Measures MM HAZ-1b and MM HAZ-1c address impacts not addressed through compliance with applicable federal, state, and regional hazardous materials regulatory requirements. MM HAZ-1c provides for clean-up of the former police shooting range consistent with US EPA guidelines not included in mandatory hazardous materials requirements for the construction of trails on the southerly slope of Icehouse Hill. Mitigation Measure MM HAZ-1d

provides for remediation of the former police shooting range, which would require identifying all areas where lead fragments from the former police shooting range on Icehouse Hill may be found. MM HAZ-1e would protect Kinder Morgan fuel pipelines from risk of upset during site construction.

Program EIR Mitigation Measures

MM HAZ-1a Confirm Achievement of Remediation Goals (Program EIR 4.G-2a). Prior to issuance of a building or grading permit for any parcel within OU-SM, OU-2, and the former landfill, the applicant shall provide the City with evidence that the Department of Toxic Substances Control (DTSC), Regional Water Quality Control Board (RWQCB), and/or the San Mateo County Environmental Health Division as the Local Enforcement Agency in relation to the landfill have approved Remedial Design and Implementation Plan(s) or final closure and post-closure maintenance plans for the area subject to the requested permit.

Prior to issuance of a building permit for any parcel within the Baylands, the project applicant shall obtain regulatory approval from the Department of Toxic Substances Control (DTSC), Regional Water Quality Control Board (RWQCB), and/or the San Mateo County Environmental Health Division as the Local Enforcement Agency in relation to the landfill for the proposed land use, in the form of a Remediation Action Completion Report or equivalent closure letter stating that remediation goals have been achieved for proposed land uses.

MM HAZ-1b: Soil and Groundwater Management Plan (Program EIR Mitigation Measure 4.G-2b). Prior to issuance of a building or grading permit for any parcel within the Baylands, a Soil and Groundwater Management Plan shall be prepared by a qualified environmental consulting firm, reviewed, and approved by DTSC and the RWQCB, and implemented by the applicant.

The Soil and Groundwater Management Plan shall also include a requirement for development and implementation of site-specific safety plans to be prepared prior to commencement of construction consistent with Occupational Safety and Health Administration (OSHA) Safety and Health Standards 29 Code of Federal Regulation (CFR) 1910.120, as well as management of groundwater produced through temporary dewatering activities.

Such site-specific safety plans shall include necessary training, operating and emergency response procedures, and reporting requirements to regulate all activities that bring workers in contact with potentially contaminated soil or groundwater, landfill gas, or leachate to ensure worker safety and avoid impacts on the environment. Further, the Soil and Groundwater Management Plan shall include protocols for any areas of the site that require excavation and relocation

of refuse material (e.g., building foundations and utility infrastructure) in accordance with Title 27 of the California Code of Regulations to ensure that the integrity of the low-hydraulic-conductivity layer requirements is maintained.

MM HAZ-1c: Master Deconstruction and Demolition Plan (Program EIR Mitigation Measure 4.G-2c). City review and approval of a specific plan per the requirements of the Brisbane General Plan shall be completed prior to submittal of any application for a demolition permit within the Project Site. Prior to issuance of a demolition permit for any parcel within the Baylands, the applicable property owner shall submit a Master Deconstruction and Demolition Plan prepared by a licensed professional to the City Building Official. The plan shall be reviewed and approved by the Building Official prior to issuance of the requested demolition permit. The demolition plan shall include documentation of hazardous materials determinations (surveys) and demolition or deconstruction recommendations in accordance with local and state requirements. If the surveys conducted by licensed professionals prior to issuance of a demolition permit per the requirements above hazardous building materials, demolition or deconstruction shall proceed in accordance with applicable Bay Area Air Quality Management District (BAAQMD), OSHA, and California Occupational Safety and Health Administration (Cal/OSHA) requirements, which may include air permits or agency notifications, worker awareness training, exposure monitoring, medical examinations, and a written respiratory protection program.

MM HAZ-1d: Former Police Shooting Range Cleanup (Program EIR Mitigation Measure 4.G-2i). Prior to any construction of trails on the southerly slope of Icehouse Hill, best management practices for lead removal consistent with United States Environmental Protection Agency Circular EPA-902-B-01-001, *Best Management Practices for Lead at Outdoor Shooting Ranges*, Revised June 2005, shall be implemented.

Additional Mitigation Measures

MM HAZ-1e: Shooting Range Remediation. Prior to any construction activities on Icehouse Hill where lead fragments from the former police shooting range may be found, the following shall be implemented consistent with United States Environmental Protection Agency Circular EPA-902-B-01-001, *Best Management Practices for Lead at Outdoor Shooting Ranges*, Revised June 2005:

1. Prepare an exhibit along with supporting technical information for review and approval by the Brisbane Police Department identifying all areas where lead fragments from the former police shooting range on Icehouse Hill may be found.

2. Within those areas identified where lead fragments from the former police shooting range might be found, sift munitions fragments from the soil for recycling.[22]
3. Sample and analyze the remaining soil in layers to assess the extent of downward contamination to determine if the leachable level is at or above the United States Environmental Protection Agency (USEPA) limit of 5 milligrams per liter (mg/L). If it does not exceed the limits, the soil can be left in place with no further action required. If the USEPA limit is exceeded, remediation subject to oversight by the appropriate regulatory agency -- San Mateo County Environmental Health Services Division or DTSC -- shall be required prior to relocation of the Mission Blue Nursery to the site.

MM HAZ-1f: Kinder Morgan Fuel Pipeline. Existing infrastructure for the Kinder Morgan Tank Farm shall be protected in place during Baylands grading and construction consistent with the following requirements and specifications.

A Construction Workplan shall be developed with Kinder Morgan to document construction means and methods, including provisions for appropriate construction techniques, settlement monitoring, and setbacks to protect the structural integrity of existing pipeline facilities in accordance with the following performance standards.

- Any fill materials placed within 100 feet of any Kinder Morgan pipeline easement shall avoid additional loading on existing Kinder Morgan fuel lines and avoid settlement of soils supporting pipelines unless required by a state of regional regulatory authority in an approved site remediation or landfill closure plan.[23]
- Excavation activities within 25 feet of a Kinder Morgan fuel pipeline easement shall be designed to ensure the integrity of manufactured slopes within the excavation at all times.
- Temporary construction dewatering for excavations below groundwater levels shall be performed in a controlled manner and avoid prolonged drawdown of the groundwater table (exceeding one month).

Prior to issuance of a grading or construction permit for activities within 100 feet of a Kinder Morgan fuel pipeline easement, the applicant for such permit shall

[22] Recycling the fragments makes them exempt from hazardous waste reporting and management requirements.

[23] As noted in Footnote 11, Caltrans' *Transportation and Construction Vibration Guidance Manual*, April 2020, does not recommend vibration criteria for protection of pipelines since buried pipelines, being constrained by the bedding material and soil surrounding them, can withstand high-vibration intensities.

demonstrate to the satisfaction of the City Engineer that adequate measures will be implemented to ensure the structural integrity of existing pipeline facilities is protected, including measures such as but not limited to physical separation of construction activities, fill, and buildings from pipeline easements along with implementation of Mitigation Measure MM NOI-5b, Protection of Underground Utilities.

The Construction Workplan shall be subject to review and approval by the City of Brisbane prior to commencement of grading within 100 feet of any Kinder Morgan pipeline easement.

Impact HAZ-2: Emissions or Handling of Hazardous or Acutely Hazardous Materials or Waste within One-Quarter Mile of a School

Less than Significant with Mitigation Incorporated

A comprehensive set of federal, state, and local laws and requirements regulate the transportation, use, storage, and disposal of hazardous materials and wastes to reduce the potential risks of human and environmental exposure during post-construction operations of the land use types permitted within the Baylands, particularly those operations occurring within 0.25 mile of a school facility. These programs also provide for training of workers to react to and contain accidental hazardous materials spills and other exposures to hazardous materials. No significant impact would thus result in relation to proximity of facilities that handle or emit hazardous or acutely hazardous materials, substances, or waste.

However, as shown in **Table 4.13-3**, proposed middle school locations do not meet all provisions of CCR Title 5, Section 14010 because they are:

- Within 150 feet of PG&E's 230 kV underground electrical transmission line along Bayshore Boulevard.
- Within 1,500 feet of the Caltrain railroad right-of-way.
- Within 1,500 feet of a PG&E 24-inch high-pressure natural gas transmission pipeline.
- Subject to liquefaction and cyclic densification during a design seismic event.

Mitigation Measure MM HAZ-2 requires the proposed middle school to meet the standards set for in CCR Title 5, Section 14010 or to prepare the required studies for review by the Department of Education and to secure approval of the proposed school site pursuant to the provisions of CCR Title 5, Section 14010(u).

Existing state and federal programs provide for protection of school sites and also provide for training of workers to react to and contain accidental hazardous materials spills and other exposures to hazardous materials. MM HAZ-2 would ensure that the proposed school site

would meet the design and safety standards set forth in CCR Title 5, Section 14010 or demonstrate safety and provide mitigation for any hazards prior to approval pursuant to CCR Title 5, Section 14010(u).

Program EIR Mitigation Measures

MM HAZ-2: Protection of School Facilities (Program EIR Mitigation Measure 4.G-3). Grade K–12 school facilities constructed within the Baylands shall not be located within 0.25 miles of a facility with hazardous emissions or that handles hazardous or acutely hazardous materials, substances or waste, unless approved by School Facilities Planning Division of the California Department of Education in conformance with California Code of Regulations (CCR) Title 5, Section 14010, which sets forth California Department of Education criteria for school site locations:

- "If the proposed [school] site is within 1,500 feet of a railroad track easement, a safety study shall be done by a competent professional trained in assessing cargo manifests, frequency, speed, and schedule of railroad traffic, grade, curves, type and condition of track need for sound or safety barriers, need for pedestrian and vehicle safeguards at railroad crossings, presence of high pressure gas lines near the tracks that could rupture in the event of a derailment, preparation of an evacuation plan. In addition to the analysis, possible and reasonable mitigation measures must be identified in accordance the referenced code." California Code of Regulations (CCR) Title 5, Section 14010 (d)
- "The [school] site shall not be located near an above-ground water or fuel storage tank or within 1,500 feet of the easement of an above ground or underground pipeline that can pose a safety hazard as determined by a risk analysis study, conducted by a competent professional, which may include certification from a local public utility commission." CCR Title 5, Section 14010 (h)

Grade K–12 school facilities shall also comply with California Education Code Sections 17210 through 17224 and related statutory provisions related to risk to human health or the environment at proposed school properties as overseen by the Department of Toxic Substances Control (DTSC). In accordance with California Education Code Sections 17210 through 17224 and related statutory provisions, the school district must prepare a Phase I Environmental Site Assessment and/or a Preliminary Endangerment Assessment (PEA) to identify potential contamination and evaluate whether it presents a risk to human health or the environment at proposed school properties as overseen by the Department of Toxic Substances Control (DTSC). The environmental investigation and any

required remediation of properties to be developed for use as schools shall be overseen by DTSC in coordination with the California Department of Education and the School Facilities Planning Division.

Final design plans shall be approved by the School Facilities Planning Division of the California Department of Education prior to commencement of construction.

All required remediation within 0.25 mile of a proposed K–12 school site within the Specific Plan area shall be completed prior to occupancy of the school.

Impact HAZ-3: Development on a Hazardous Materials Site Identified Pursuant to Government Code Section 65962.5

Less than Significant

Various portions of the Specific Plan area, including the former Brisbane Landfill, OU-SM, and OU-2, are included on databases listing hazardous materials pursuant to Government Code Section 65962.5. Baylands development would be consistent with approved site remediation and remediation and landfill closure would occur prior to Baylands development. In addition, the only off-site location where Baylands-related off-site infrastructure is proposed is the PG&E Martin Substation, which is subject to regulatory oversight related to past cleanup activities. Thus, the potential for exposure of workers, the public, and the environment to hazardous materials within sites included on databases listing hazardous materials pursuant to Government Code Section 65962.5 would be less than significant.

Impact HAZ-4: Safety or Noise Hazards Due to Aircraft Operations

Less than Significant

Because the Specific Plan area is not within SFO's 65 dB CNEL, an Airport Safety Compatibility Zone, FAA Notification Area, or Airport Imaginary Surface area, the SFO Airport Land Use Compatibility Plan does not identify any land use restrictions due to the location of the Baylands in relation to SFO. Thus, development of the Specific Plan is consistent with the adopted Comprehensive Airport Land Use Compatibility Plan for the Environs of San Francisco International Airport and would not result in a safety hazard or excessive noise for people residing or working in the Specific Plan area due to aircraft operations.

Impact HAZ-5: Emergency Preparedness

Less than Significant

Development review by the City of Brisbane, in combination with review by the North County Fire Authority, would ensure availability of needed evacuation routes and access for emergency response personnel, provision of adequate fire flow and on-site safety measures,

implementation of measures to reduce the potential for emergencies, and expand facilities needed to respond to emergencies. Thus, Specific Plan development would not interfere with implementation of an adopted emergency plan, impede evacuation routes, or restrict access for emergency response or recovery.

1. Hydrology and Water Quality

Impact HWQ-1: Water Quality Protection

Less than Significant with Mitigation Incorporated

Baylands development would be required to comply with General Construction Activity (Construction General Permit, Order No. 2009-0009-DWQ, as amended by 2010-0014-DWQ and 2012-0006-DWQ) and the General WQ 2022-0057-DWQ NPDES No. CAS000002), which would reduce construction impacts to less than significant.

The Construction General Permit would require each onsite and offsite Baylands construction activity to minimize or prevent pollutants in stormwater discharges and authorized non-stormwater discharges through use of controls, structures, and management practices as set forth in the General Permit that achieve best available technology (BAT) for toxic and non-conventional pollutants and best conventional technology (BCT) for conventional pollutants. The General Permit also requires that each site-specific construction activity development be designed to ensure that stormwater discharges and authorized non-stormwater discharges will not:

- Adversely affect human health or the environment;
- Contain pollutants in quantities that threaten to cause pollution or a public nuisance; or
- Contain pollutants that cause or contribute to an exceedance of any applicable water quality objectives or water quality standards contained in an applicable water quality control plan.

The Construction General Permit requires that site grading and site-specific development projects encompassing more than 1 acre:

- Complete a risk assessment to determine pollution prevention requirements pursuant to the three risk levels established in the General Permit;
- Eliminate or reduce non-stormwater discharges to storm sewer systems and other waters of the nation; and
- Develop and implement a SWPPP that identifies the sources of sediment and other sources that affect the quality of stormwater discharges and specifies BMPs that will reduce pollution in stormwater discharges to the Best Available Technology

Economically Achievable/Best Conventional Pollutant Control Technology standards; and Perform inspections and maintenance of all BMPs.

However, operational BMPs generally call for applying pesticides only as specified on the "Pesticide Use Recommendation" on the label. Because of the large area within the Baylands being landscaped, a significant water quality impact would nevertheless result.

Implementation of Mitigation Measures **MM GEO-4a (Program EIR Mitigation Measure 4.E-4a) and MM** HWQ-1 (Program EIR Mitigation Measure 4.H-5) would minimize use of chemical pesticides and herbicides within the Baylands and, in combination with NPDES permit requirements and compliance with SWPPPs and Provision C.3, would reduce impacts to less than significant.

Program EIR Mitigation Measures

MM HWQ-1: Integrated Pest Management (Program EIR Mitigation Measure 4.H-5). Prior to issuance of an occupancy permit for site-specific development within the Baylands, an integrated pest management plan shall be prepared and implemented, subject to City review and approval, to set forth a preventative, long-term, low toxicity program to control pests. The plan shall provide guidelines for landscape and building maintenance with the emphasis on minimizing the use of pesticides while controlling pests. At a minimum, the integrated pest management plan shall include:

- ***Identification of acceptable pest levels*** (action thresholds) with an emphasis on *control*, not *eradication*, identifying site and pest specific action thresholds, and the controls to be used if those thresholds are exceeded.
- ***Preventive practices:*** Design, construction, and maintenance of landscape facilities, and buildings, as well as operation of uses that prevent or minimize pest problems would include integrated pest management strategies, sanitation practices, and proactive maintenance to minimize pest infestations.
- ***Monitoring:*** Regular observation, including inspection and identification.
- ***Mechanical controls:*** Should a pest reach an unacceptable level, provide for mechanical methods as the first options, including include simple hand-picking, erecting insect barriers, using traps, vacuuming, and tillage to disrupt breeding.
- ***Biological Controls:*** Provide for use of natural biological processes and materials for control, including promoting beneficial insects that prey on

target pests and biological insecticides derived from naturally occurring microorganisms.

- ***Responsible Pesticide Use:*** Provide for use of synthetic pesticides generally only as required when preferred methods are infeasible or ineffective, including use of the least toxic pesticide that will do the job and is the safest for other organisms and for air, soil, and water quality; use of pesticides in bait stations rather than sprays; or spot-spraying rather than general application.

Impact HWQ-2: Groundwater Recharge and Sustainable Management

Less than Significant

Baylands development would not interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level that could impede sustainable management of a groundwater basin or cause subsidence for the following reasons:

- Visitacion Valley Groundwater Basin
    - Local groundwater is not proposed to be used for potable or non-potable purposes as part of Baylands development.
    - Provision C.3 of the NPDES Municipal Regional Stormwater Permit requires runoff during a storm event be retained or detained onsite such that post-development peak flows do not exceed pre-development conditions. Release of stormwater flows to unlined drainages in the Ecological Park and Visitacion Creek will reduce loss of groundwater recharge due to increased impervious surface area within the Specific Plan.
    - Title 27 requirements for final closure of the former Brisbane Landfill require installation of a landfill cap to prevent infiltration of from the ground surface through the waste matrix in the former landfill. Thus, loss of pervious surface area within the landfill footprint is the result of final landfill closure, which is required to precede Baylands development, rather than to Baylands development itself.
    - As shown in **Figure 4.14-2**, the Visitacion Valley groundwater basin overlies the Brisbane Lagoon, which will continue to recharge the basin.
    - Approximately 26 acres of the Baylands will become subject to daily inundation as the result of projected sea level rise, providing continuous recharge to the basin and thereby preventing subsidence.

  - As a very low priority basin, compliance with Sustainable Groundwater Management Act within the Visitacion Valley Basin is not required.

- Westside Groundwater Basin
  - The Westside Basin is not in a condition of critical overdraft and is designated by DWR as low priority.
  - As indicated in the Baylands Water Supply Assessment, Cal Water does not project any extractions from the South Westside Basin in excess of its agreed upon 1,534 afy limit for groundwater extractions.

Impact HWQ-3: Flood Hazards

Less than Significant with Mitigation Incorporated

The Specific Plan's drainage system does not implement Program EIR Program Mitigation Measure 4.H-4a and ensure that key roadways (Sierra Point Parkway, Lagoon Road, Geneva Avenue, and Tunnel Avenue) would be available as evacuation routes in a 100-year storm event. Proposed Baylands development would increase the site's impervious surface area and thereby increase flooding frequency, duration, or depth at two locations (Industrial Way – Bayshore Boulevard intersection; adjacent to the Kinder Morgan tank farm, Brisbane corporation yard, Caltrain right-of-way) but only "require measures by others to adapt to future conditions" to address increased flooding. In addition, Tunnel Avenue would not be available for emergency response or evacuation in the event of a 100-year flood even though the substantial increase in Specific Plan development would necessitate such use.

With implementation of Program Mitigation Measure 4.H-4a, Baylands development would provide adequate flood protection for new residential, commercial, and other uses within the Baylands because:

- The peak flow rate from a 25-year storm event would be accommodated within designated drainage areas and underground drainage pipes; and
- The peak flow rate from a 100-year storm event would be accommodated within underground drainage pipes, designated drainage areas, and within streets such that the finished floor elevations of buildings would have more than 1-foot of freeboard above the 100year storm event hydraulic grade line water elevation with tidal flow and 100 years of estimated sea level rise.

A significant impact would nevertheless result because the Specific Plan's drainage system does not fully implement Program EIR Mitigation Measures 4.H-4a requires compliance with NPDES Construction General Permit and City of Brisbane Municipal Regional Stormwater Permit)or

4.H-4b(requires compliance with RWQCB dewatering permit or Bayshore Sanitary District sanitary sewer discharge requirements).

Mitigation Measures MM HWQ-3a through MM HWQ-3c would ensure adequate response access to all portions of development sites along Frontage Road, including basement parking areas, and would also ensure that Baylands development would not increase flooding frequency, duration, or depth of a 100-year storm on adjacent lands even with anticipated SLR of 6.5 feet through the Year 2100.

Program EIR Mitigation Measures

MM HWQ-3a: Known Drainage Deficiencies (Program EIR Mitigation Measure 4.H-4a). Prior to issuance of a building permit, all site-specific development plans within the Baylands shall include systemwide drainage improvements that shall accommodate all increased runoff and correct the Project's incremental, additional impact to flood risks to areas with existing deficiencies (e.g., Levinson Overflow Area and the PG&E property):

- On-site storm drainage collection facilities shall be sized to convey the peak flow rate from a 25-year storm event entirely within the piping system such that Baylands roadways and recreational facilities are not flooded.
- Drainage improvements shall accommodate the 100-year peak storm event within the piping system and within streets such that building finished floor elevations provide a minimum of 1 foot of freeboard above the 100-year storm event hydraulic grade line water elevation with tidal flow and Year 2100 projected sea level rise.
- Key roadways including Sierra Point Parkway, Lagoon Road, and Tunnel Avenue shall be designed such that these roadways are available as evacuation routes in the event of a 100-year storm event.

The proposed system design shall be submitted to the City Engineer for approval and shall hydraulically isolate existing drainage inlets fronting the Levinson Overflow Area and the PG&E property from the existing Brick Arch Sewer system.

MM HWQ-3b: Bayshore Boulevard Drainage (Program EIR Mitigation Measure 4.H-4b). Prior to issuance of a building permit, all site-specific development plans within the Baylands shall include additional conveyance capacity by incorporating new storm drain facilities along Bayshore Boulevard north of Industrial Avenue. Development plans shall also require addition of a new inlet near the Bayshore Boulevard and Industrial Way intersection that is large enough to intercept

surface flows from Levinson Overflow Area and the PG&E property in accordance with and as approved by the City. Review and approval by the City Engineer shall be required to confirm that conveyance capacity is sufficient to accommodate the 100-year peak storm event within the piping system and streets such that building finished floor elevations provide a minimum of 1-foot of freeboard above the 100-year storm event hydraulic grade line water elevation with tidal flow and Year 2100 projected sea level rise.

Additional Mitigation Measures

MM HWQ-3c: Drainage and Flood Protection along Frontage Road. Drainage along Frontage Road shall be designed to:

- Avoid flooding of parked vehicles consistent with National Flood Insurance Program Technical Bulletin 6, *Requirements for Dry Flood-Proofed Below-Grade Parking Areas under Non-Residential and Mixed-Use Buildings* (FEMA 2021).
- Provide emergency response access to all portions of development sites along Frontage Road.

Impact HWQ-4: Release of Pollutants Due to Flood and Tidal Action, Sea Level Rise-Induced Changes to Groundwater, Tsunami, or Seiche

Less than Significant

The Specific Plan requires stormwater runoff to be treated prior to discharge to wetlands, Visitacion Creek, Brisbane Lagoon or San Francisco Bay in compliance with Municipal Regional Stormwater NPDES Permit (MRP) Order No. R2-2022-018, NPDES Permit No. CAS612008 adopted by the RWQCB-San Francisco Bay Region in May 2022. Appropriate source control, site design, and stormwater treatment measures that would be implemented are identified in:

- The San Mateo Countywide Water Pollution Prevention Program C.3 Regulated Project Guide, which describes stormwater treatment options, techniques, design, and maintenance requirements.
- The Green Infrastructure Design Guide, which is a comprehensive design guide for the design, construction, and maintenance of green infrastructure, including sustainable stormwater design.

In addition:

- The operation of the leachate collection and recovery system to be installed as part of final landfill closure prior to Specific Plan development would maintain groundwater

flow toward San Francisco Bay and would capture and treat contaminated groundwater, if any.

- Project water storage and above-ground fuel storage tank facilities would be constructed to withstand an earthquake and not rupture. Above-ground fuel tanks to be constructed at fire stations would be provided with containment such that a leak would not be carried into streets, storm drain systems, Visitacion Creek, or the Brisbane Lagoon.
- The Specific Plan area is not located within a tsunami hazard zone. Geologic-induced seiche events have not been documented in San Francisco Bay, and meteorologic effects are quickly dissipated due to the connection with the Pacific Ocean.

m. Geology, Soils, and Seismicity

Impact GEO-1: Fault Rupture

No Impact

There are no known active or potentially active fault traces across the Baylands, and the site is not located within an Alquist-Priolo Earthquake Fault Zone.

Impact GEO-2: Seismic Ground Shaking

Less than Significant

Because the Specific Plan area is located in a seismically active region, buildings and other structures developed within the Baylands would be at risk of damage related to seismic ground shaking and could directly or indirectly expose people to a risk of loss, injury, or death compared to baseline.

New structures for human occupancy would conform to the seismic design parameters of the California Building Code (CBC), while restoration of the Roundhouse would be subject to California Building Code seismic standards for historic structures. Compliance with these requirements would be reviewed by the City of Brisbane for appropriate inclusion in the building plan check and development review process prior to issuance of grading and building permits. Baylands geotechnical studies prepared for this EIR (Appendices M.1, M.2) provide recommendations for compliance with CBC standards, state law and building codes, final geotechnical studies for each site-specific development project will define precise requirements for the foundation system for each building site needed for compliance with the CBC based on the site-specific engineering properties of the materials beneath the structure, combined with the intended loading (weight) of the structure itself.

Impact GEO-3: Liquefaction and Seismic-Related Ground Failure

Less than Significant

Because of the presence of high groundwater and loose, unconsolidated soils underlying the Specific Plan area, which is located in a seismically active region, liquefaction could occur within the Baylands, adversely affecting structures. As documented in the geotechnical studies prepared for the Baylands in 2022 (Appendices M.1, M.2), a substantial risk of loss, injury, or death by exposing people or structures to secondary effects of seismic shaking (e.g., ground lurching, lateral spreading) would not result from Baylands development. Nevertheless, due to the presence of high groundwater and loose, unconsolidated soils underlying the project site, liquefaction within the Baylands following a major earthquake could result in loss of bearing pressure, lateral spreading, sand boils (liquefied soil exiting at the ground surface), and other potentially damaging effects if not addressed in geotechnical engineering design of buildings and infrastructure.

Baylands development would be required to conform to site-specific foundation design parameters required for compliance with the CBC (Municipal Code Sections 15.01.210, Soils Engineering Report and 15.01.220, Engineering Geology Report), which are reviewed by the City of Brisbane for appropriate inclusion in the building plan check and development review process prior to issuance of grading and building permits.

Site-specific geotechnical analyses building upon the information provided in the geotechnical studies prepared for the Baylands in 2022 would identify the specific seismic and foundation design parameters and monitoring to be required by the City for Baylands development to comply with the CBC based on site-specific geotechnical conditions and the precise location, height, massing, and bulk of each future building within the Baylands.

Impact GEO-4: Slope Stability

Less than Significant with Mitigation Incorporated

Site-specific development projects will be required to comply with Brisbane General Plan policy requirements and the most recent California Building Code requirements for slope stability for manufactured slopes and be incorporated into development plans. All final design and engineering plans submitted for Baylands development would be subject to review and approval by the City of Brisbane Building Official prior to issuance of a grading or building permit.

Although manufactured slopes constructed as part of Baylands development would be required to comply with the most recent California Building Code requirements at the time of construction to ensure the stability of existing and manufactured slopes under static and pseudo-static conditions, placement of fill within 600 feet of the north shore of the lagoon would be inconsistent with both recommendations of the 2008 geotechnical study prepared for the

Baylands and Program EIR Mitigation Measure 4.E-4a and could cause instability in the Bay Mud that underlies this area.

Implementation of Mitigation Measure MM GEO-4a (Program EIR Mitigation Measure 4.E-4a) would ensure the stability of manufactured slopes throughout the Baylands. Mitigation Measure MM GEO-4b would ensure that placement of fill materials within 600 feet of Brisbane Lagoon for roadway improvements, habitat enhancement, recreational facilities, or other approved site improvements such as construction of Lagoon Park would not adversely affect the stability of underlying Bay Mud.

Program EIR Mitigation Measures

MM GEO-4a: Manufactured Slopes (Program EIR Mitigation Measure 4.E-4a). Site-specific development projects within the Baylands shall not place new fill materials within 600 feet of Brisbane Lagoon, except when required for roadway improvements, habitat enhancement, recreational facilities, or other site improvements permitted by the Specific Plan. Placement of new fill materials within 600 feet of the Brisbane Lagoon shall be designed to prevent erosion of soils into the lagoon during and subsequent to construction. All manufactured slopes shall require certification by a licensed geotechnical engineer to the satisfaction of the City Engineer that a factor of safety of at least 1.5 for static conditions and 1.2 under dynamic conditions will be achieved.

Additional Mitigation Measures

MM GEO-4b: Placement of Fill Materials within 600 Feet of the Brisbane Lagoon. Placement of fill materials within 600 feet of the Brisbane Lagoon for roadway improvements, habitat enhancement, recreational facilities, or other approved site improvements shall require certification by a licensed geotechnical engineer to the satisfaction of the City Engineer that the stability of underlying Bay Mud would not be adversely affected.

Impact GEO-5: Expansive Soils and Soil Corrosivity

Less than Significant

Young Bay Mud underlying the Baylands is both expansive and corrosive. Existing state law and building codes provide for an adequate level of safety and the Baylands geotechnical studies prepared for this EIR provide recommendations for compliance with CBC standards, state law, and building codes that will be incorporated into site grading, as well as Baylands building and infrastructure construction. The foundation system for each building within the Baylands must be designed in accordance with the site-specific engineering properties of the soil

characteristics beneath the structure and the specific loading characteristics of the building itself. Thus, to comply with the CBC:

- All concrete and metals in contact with corrosive soil would be designed and constructed based on the results of the site-specific soil corrosivity testing and subsequent recommendations of a qualified geotechnical engineer as reviewed and approved by the City. Treatment methods include coating, using galvanized metals, or cathodic protection.
- Building foundations and infrastructure in contact with expansive soils would be designed and constructed based on the results of the site-specific soil corrosivity testing and subsequent recommendations of a qualified geotechnical engineer as reviewed and approved by the City. Treatment methods include removal of expansive soils or chemical treatment such the addition of lime.

Impact GEO-6: Paleontological Resources

Less than Significant with Mitigation Incorporated

Disturbance of paleontological resources within the Colma or Merced formations would result in a significant impact due to their potential for paleontological resources. These formations are more than 25-30 feet below ground surface and the only deep excavations that would be undertaken for Baylands development within these formations would be pile foundation installation. Surficial and shallow excavations, which will make up the majority of ground-disturbing activity, have no potential to encounter or impact paleontological resources. Therefore, it is not likely that paleontological resources would be identified during ground disturbing within the Pleistocene Colma or Pliocene-Pleistocene Merced formations. If an inadvertently identified paleontological resource is damaged during construction, the impact would be significant.

Implementation of Mitigation Measures MM GEO-6a and MM GEO-6b would reduce impacts to paleontological resources to a less-than-significant level by requiring training of construction personnel in paleontological resource identification and requiring a qualified paleontologist to be retained in the event that paleontological resources are identified in order to address any inadvertent discoveries. Mitigation Measure MM GEO-6b requires inadvertent discoveries of fossils to be collected by the paleontological monitor and/or Qualified Paleontologist, who would prepare, identify, and catalogue such discoveries prior to placing such discovered fossils at a public, non-profit institution, or public school for their preservation. While it is highly unlikely that paleontological resources would be found in the landfill or disturbed portions of the Project Area, required awareness training for construction personnel who are involved in ground disturbance in undisturbed areas of the Project Area would facilitate identification of any fossils inadvertently exposed during grading and excavation activities.

Mitigation Measures

MM GEO-6a: Paleontological Resources Awareness Training. Prior to the start of any ground disturbing activities anticipated to exceed 25 feet in depth, the Qualified Paleontologist, or a paleontological specialist under the supervision of the Qualified Paleontologist, shall conduct pre-construction worker paleontological resources sensitivity training. The Qualified Paleontologist, or a paleontological monitor under the supervision of the Qualified Paleontologist, shall contribute to any construction worker paleontological resources sensitivity training either in person or via a training module. The training shall include information on what types of paleontological resources could be encountered during excavations, what to do in case an unanticipated discovery is made by a worker, and laws protecting paleontological resources. All construction personnel shall be informed of the possibility of encountering fossils and instructed to immediately inform the construction foreman or supervisor if any bones or other potential fossils are unexpectedly unearthed in an area where a paleontological monitor is not present. The Applicant shall ensure that construction personnel are made available for and attend the training and retain documentation demonstrating attendance.

MM GEO-6b: Inadvertent Discovery of Paleontological Resources. If a paleontological resource is discovered during construction, the paleontological monitor shall be empowered to temporarily divert or redirect grading and excavation activities in the area of the exposed resource to facilitate evaluation of the discovery. An appropriate buffer area shall be established by the Qualified Paleontologist around the find where construction activities shall not be allowed to continue. Work shall be allowed to continue outside of the buffer area. At the Qualified Paleontologist's discretion and to reduce any construction delay, the grading and excavation contractor shall assist the Qualified Paleontologist or paleontological monitor in removing rock samples for initial processing and evaluation of the find. All significant fossils shall be collected by the paleontological monitor and/or the Qualified Paleontologist. Collected fossils shall be prepared to the point of identification and catalogued before they are submitted to their final repository. Any fossils collected shall be curated at a public, non-profit institution with a research interest in the materials, such as the UCMP, if such an institution agrees to accept the fossils. If no institution accepts the fossil collection, they shall be donated to a local school in the area for educational purposes. Accompanying notes, maps, photographs, and a technical report shall also be filed at the repository and/or school.

Impact GEO-7: Use of Septic Tanks or Alternative Wastewater Systems

No Impact

Because the Baylands Specific Plan requires construction of an integrated municipal sewer system to serve all proposed uses, septic systems or other alternative wastewater disposal systems would not be used and no impacts related to the capability of soils to support such wastewater treatment would result.

n. Utilities, Service Systems, and Water Supply

Impact UTL-1: Water Supply

Less than Significant

Cal Water, the City of Brisbane, Bayshore Sanitary District, and Baylands Development, Inc have signed a non-binding letter of understanding that provides a framework to supply water to the Baylands, Beatty, and Sierra Point areas by expanding its service area into Brisbane. Water supply provided by Cal Water to its expanded service area within Brisbane would consist of a combination of potable water purchased from the SFPUC supplemented by five existing off-site groundwater wells and recycled water from the water recycling facility to be constructed within the Baylands. Cal Water potable supplies would be delivered via existing turnouts from the SFPUC Regional Water System.

As stated in the Baylands Water Supply Assessment, the increased potable water demand for the Baylands Specific Plan and future projects within Sierra Point would be offset by Cal Water's Development Offset Program and are therefore considered by Cal Water to have a zero net increase. The Development Offset Fee Program provides funds to accelerate water supply projects and expand customer conservation programs. Water projects included in the offset fee program include projects Cal Water is partnering with the SFPUC as described in SFPUC's Alternative Water Supply Plan (SFPUC 2024c), as well as other projects that would increase local water supply. SFPUC alternative water supply projects include supply projects (surface water, purified water, groundwater, or recycled water), storage projects, and conveyance projects.

The Baylands Water Supply Assessment indicates that no shortfalls relative to total demands would occur under normal year conditions. During single dry years, assuming implementation of the Bay-Delta Plan Amendment, the annual supply for the three Peninsula Districts' service areas will be reduced to 21,039 acre-feet per year by 2045. Supply shortfalls relative to total demands during single dry years are estimated to range between 35 percent in 2025 and 44 percent in 2045. During multiple dry years, Cal Water estimates that annual supply for its three Peninsula Districts will be reduced to 23,615 acre-feet in 2025 during the first year of a drought, and 20,492 acre-feet in 2025 in the second, third, fourth, and fifth years of drought, assuming

implementation of the Bay-Delta Plan Amendment. Cal Water further estimates that in 2045, annual supply will be reduced to 20,954 acre-feet during the first three years of a drought, and 18,061 afy in the fourth and fifth years of drought. Supply shortfalls relative to total demands are estimated to range between 36 percent during the first year of a drought in 2025 to 53 percent during the fifth year of a drought in 2045.

The Baylands Water Supply Assessment (Appendix P) stated that projected shortfalls would be addressed through implementation of the District's Water Supply Contingency Plan, which requires any new residential, commercial, or industrial development within any of the three Peninsula Districts that would increase net demand by more than 50 acre-feet per year to pay a special facilities fee, referred to as a "developer offset fee," of $15,400 per acre-foot of net demand increase.[24] Developer offset fees would be used to fund accelerated water supply projects and expanded customer conservation programs. The alternative water projects included in the Developer Offset Fee include projects Cal Water is partnering with the SFPUC as described in SFPUC's Alternative Water Supply Plan. The result of this program is that new residential, commercial, and industrial development projects that pay offset fees are considered by Cal Water to result in a net zero increase in potable water demand.

In addition, BAWSCA, Cal Water, and SFPUC are pursuing the development of additional water supplies to improve SFPUC's Regional Water System and South San Francisco District supply reliability. Pursuant to the water supply assessment, required participation in Cal Waters' Development Offset Program would be that neither Specific Plan development nor anticipated future development within Sierra Point would result in a net increase in water demands. In addition, the Baylands water recycling facility would eliminate the use of potable water for non-potable purposes within the Specific Plan area and would provide 0.41 mgd of recycled water to the Cal Water South San Francisco District, which does not currently have access to recycled water, for non-potable uses.

Impact UTL-2: Construction and Improvement of Utility and Service System Facilities

Less than Significant

No improvements to the SFPUC wastewater treatment facilities would be needed to treat Baylands-generated wastewater. Baylands development would not exceed Brisbane's 6.0 mgd capacity. In addition, the raw sewage, treated sewage, and waste activated sludge discharged to SFPUC's Southeast Treatment Plant would be sufficiently diluted so as to (1) not require any modifications to the plant or result in changes to water quality from treated wastewater and (2) not result in changes to water quality from treated wastewater discharged to San Francisco Bay.

[24] "Net demand increase" is defined as the expected total potable water use for the development once it is completed, minus the average annual existing potable water use on the property over the previous five years.

Electrical utility improvements would be designed and installed by PG&E in accordance with CPUC and PG&E design standards. Conformance with applicable CPUC, PG&E and City requirements would sustain efficiency of the utility grid and reduce life-cycle costs.

Impact UTL-3: Waste Diversion

Less than Significant

Baylands development would minimize solid waste generation and maximize diversion of solid wastes from landfills and incinerators consistent with applicable solid waste management and reduction statutes, regulations, plans, policies, and strategies.

Baylands development would meet the requirements of Brisbane Municipal Code Chapter 15.75 that a minimum of 65 percent of nonhazardous construction and/or demolition waste and 100 percent of inert solid material associated with excavations and land clearing operations, including trees, stumps, and rocks be recycled and/or salvaged for re-use.

Baylands development would also, at a minimum, participate in the same waste diversion programs provided by Recology operations to residential and commercial customers within the City and County of San Francisco, which exceed the requirements of applicable solid waste management and reduction statutes, regulations, plans, policies, and strategies and are more extensive than those currently available within Brisbane.

Impact UTL-4: Landfill Capacity

Less than Significant

Because Recology's Hay Road Landfill currently has daily capacity to accept solid waste from the Baylands and approximately 27,569,000 cubic yards of long term capacity with an estimated remaining site life of 38 years, the addition of 535 cubic yards of solid waste per day from the Specific Plan area on a peak construction day (3,054 tons) and 427 tons per day following construction would not exceed the permitted daily capacity of the Hay Road landfill or substantially reduce its life expectancy. Thus, Specific Plan development would not exceed the capacity of area landfills, and no new or expanded facilities would be needed.

o. Public Services

Impact PUB-1 New and Expanded Public Facilities

Less than Significant with Mitigation Incorporated

The Baylands Specific Plan is expected to generate a maximum resident population of 4,905 and a maximum daytime worker population of approximately 19,480 at buildout, which would approximately double Brisbane's population and employment base. To accommodate the

anticipated doubling of service calls that Baylands development would cause and maintain adequate police and fire response times, the City prepared a Police Facilities and Staffing Plan (Appendix N.1) and, in conjunction with the North County Fire Authority, prepared a Fire Facilities and Staffing Plan (Appendix N.2).

To provide service to the Baylands and maintain citywide response times, the Police Department would initiate a two-beat patrol system by adding a new 24/7 officer shift and one civilian daytime shift along with the equipment needed to support the additional shift, along with establishment of a police substation within the Baylands to accommodate additional required staff.

To accommodate the anticipated doubling of service calls that would result from Baylands development and maintain adequate citywide response times, including adequate response times for buildings over 75 feet in height and specialized response to calls for medical assistance, rescue, hazmat, and other special functions within Brisbane, the Fire Protection and Facilities Plan calls for:

- Relocation of the existing NCFA Fire Station No. 81 to 140 Valley Drive to house the existing Engine Company No. 81 and temporarily house a new ladder truck company.
- Establishment of a second fire station within Brisbane to permanently house the new ladder truck company along with a new "squad."[25]

To accommodate students from the Baylands, the Bayshore Elementary School District proposes to establish a middle school within the Baylands and convert the existing Bayshore School to an elementary school serving grades PK-5.[26]

Impacts associated with construction of public facilities within the Specific Plan area would be indistinguishable from those of other grading and construction activities within the Baylands, which would lead to significant unavoidable net increases in emissions of non-attainment criteria pollutants (ROG, NOx, PM_{10}, $PM_{2.5}$), and greenhouse gas. Operation of Baylands-related public facilities would also contribute to significant and unavoidable air quality and greenhouse gas impacts. The contribution of Baylands-related public facilities impacts is addressed in the air quality and greenhouse gas emissions sections of this chapter.

[25] "Squad" refers to a specialized company whose primary focus may be suppression but carry specialized equipment and are trained to perform hazmat, rescue, and other special functions.

[26] The existing Bayshore School currently serves all students from pre-kindergarten through 8th grade.

Impact PUB-1 would be less than significant in relation to police, fire protection, and schools for the following reasons:

- Where the physical environmental effects associated with relocating the existing Fire Station No. 81 can be distinguished from the overall assessment of the Specific Plan, they are explicitly addressed and would be less than significant.[27]
- Since the existing Bayshore School was just remodeled and upgraded in 2017, only minimal exterior and interior improvement would be needed to convert the Bayshore School from a PK–8 school to a PK–5 elementary school.

Impact PUB-1 would, however, be significant in relation to libraries and the City's corporation yard for the following reasons:

- The Specific Plan would more than double Brisbane's existing resident and daytime worker population without expanding library facilities, resulting in overuse and deterioration of the existing Brisbane Library.
- The existing corporation yard is not capable of storing sufficient equipment to maintain existing service levels for the City of Brisbane with the addition of Baylands service demands. The result could be inadequate maintenance capability and deterioration of municipal infrastructure. Accordingly, expansion of the City's corporation yard would be required.

Mitigation Measures MM PUB-1a and MM PUB-1b provide for adequate library facilities and land for a new corporation yard that would maintain existing service levels with the addition of Baylands service demands. The physical environmental effects of expanding the City's corporation yard cannot be parsed out from the overall impacts of Baylands development and have been addressed throughout the impact analyses provided in this EIR.

Program EIR Mitigation Measures

MM PUB-1a: On-Site Library (Program EIR Mitigation Measure 4.L-4). To avoid overuse of existing and proposed library facilities, a library facility shall be developed within the Baylands that is of sufficient size to serve the Specific Plan's population. The on-site library shall be constructed and operational prior to issuance of the occupancy permits for more than 50 percent of the residential dwelling units permitted by the Specific Plan, thereby ensuring an on-site resident population at the time of its opening.

[27] Impacts associated with relocation of the existing Figure Station No. 81 are explicitly analyzed in the following EIR sections: Land Use, Biological Resources, Cultural Resources, Air Quality, Greenhouse Gas Emissions, Noise and Vibration, and Hazards and Hazardous Materials.

Additional Mitigation Measures

MM PUB-1b: Corporation Yard. The Specific Plan shall reserve a site for a new corporation yard acceptable to the Brisbane Public Works Director that meets the following criteria:

- Approximately 2.5 usable acres;
- Generally square in shape;
- Level;
- Fully remediated; and
- Has a direct connection to a minimum roadway classification of collector.

p. Recreational Resources

Impact REC-1: Physical Deterioration of a Park or Recreational Facility

Less than Significant

The 13.2 acres per 1,000 population (64.8 acres) of parks and trail facilities proposed by the Baylands Specific Plan exceeds the current 5.03 acres per 1,000 population available to Brisbane residents. Although new Baylands residents would be able to use existing City parks, existing Brisbane residents would also be able to use the Baylands parks. By providing substantially more parkland per 1,000 population than is currently available to Brisbane residents, Baylands development would not result in overuse of existing neighborhood and community park acreage such that substantial physical deterioration of existing facilities in Brisbane would occur or be accelerated.

Impact REC-2: Physical Deterioration of Candlestick Point Windsurfing Resources

Less than Significant

Although Baylands development would cause some decrease in average wind speeds and increase in turbulence, wind conditions within the majority of the Candlestick Point windsurfing area, including the launch area, would not be affected by the Specific Plan. Areas that would be affected are generally limited to 300-yard area along the shoreline, encompassing about 20 percent of the primary windsurfing area within which the average change in wind speed would generally be 1 to 2 mph, with changes in turbulence generally limited to 1 to 1.5 mph. Thus, Baylands development would not substantially degrade the primary windsurfing area offshore from the Baylands within the Candlestick Point State Recreation Area.

q. Wildland Fire

Impact WLF-1: Exacerbate Fire Risk

Less than Significant with Mitigation Incorporated

Because sparks originating from construction activities have the potential to ignite vegetation or other materials within or adjacent to the construction sites, a significant impact would occur.

Baylands development would be required to comply with the California Building Code, California Fire Code, and Municipal Code fire prevention and weed and flammable waste abatement requirements, which will ensure that required safety measures are incorporated into all building designs. However, human use of trails constructed through or adjacent to habitat areas as well as recreational improvements on Icehouse Hill have the potential for ignition of dry vegetation.

Mitigation Measure MM WLF-1 identifies specific precautions to be taken prior to and during construction activities that occur within or adjacent to non-irrigated vegetated areas and ensures that crew have been trained in the use of the equipment to extinguish small fires.

By minimizing the risk of construction-related fire ignition, implementation of MM WLF-1 would also minimize the potential for a wildfire to spread and expose people to pollutant concentrations from a wildfire or cause a substantial risk of loss, injury, or death due to downslope or downstream flooding or landslides as the result of runoff, post-fire instability, or drainage changes.

Mitigation Measures

MM WLF-1: Wildfire Risk Reduction. To prevent sparking a wildland fire, construction activities within or adjacent to non-irrigated vegetated areas shall be subject to the following requirements:

- Construction activities shall not occur during red flag warning days.
- Internal combustion engines used in construction shall be equipped with spark arrestors that are in good working order.
- Equipment staging and storage areas shall be cleared of extraneous flammable materials and provided with a non-flammable surface.
- Fires ignited on site shall be immediately reported to the North County Fire Authority.
- No driving (cars, trucks, all-terrain vehicles, or similar) shall be permitted over unmaintained dry vegetation.

- Equipment engines shall be kept free of oil and dust, and mowers shall be kept free of flammable materials.
- Weed trimmers shall be used to cut down any dry weeds and grass before commencing any construction activities.
- Because a rock hidden in vegetation can start a fire if struck by a metal blade, large rocks in the area of grading or blading shall be removed before clearing and grubbing.
- Smoking shall be restricted to designated smoking areas that are void of vegetation and have appropriate cigarette butt receptables.
- Construction crew vehicles within or adjacent to areas of non-irrigated vegetation shall be equipped with a water-type fire extinguisher and crew shall be trained in the use of the fire extinguisher in the event that equipment sparks a fire.

ES.6 ALTERNATIVES

CEQA requires that an EIR describe a range of reasonable alternatives to the project, or to the location of the project, which could feasibly attain the basic objectives of the project, while avoiding or reducing the significant environmental effects of the proposed Project and to evaluate the comparative merits of the alternatives. Chapter 8, *Alternatives*, also evaluates alternatives to the proposed Project as required by CEQA.

ES.6.1 DESCRIPTION OF ALTERNATIVES ANALYZED IN THIS EIR

a. No Project Alternatives

The No Project-No Build Alternative assumes that the Baylands Specific Plan would not be approved and there would be no further development within the Baylands. No infrastructure improvements would be made, existing uses would continue but not expand, and any new uses within the Baylands would either occupy existing buildings or operate as interim or temporary uses. Since no future development would occur:

- Neither site remediation nor final Title 27 landfill closure would be undertaken;
- No site grading or new construction would be undertaken; and
- An expanded water supply for the Baylands would not be acquired.

The Geneva Avenue extension would not be part of Baylands development but could nevertheless be constructed by others as part of the Bi-County Transportation Study.

The No Project-General Plan Buildout Alternative assumes that the Baylands Specific Plan as it is currently proposed would not be approved and that future development of the Baylands would occur without any amendments to the Brisbane General Plan. Thus, development of the No Project-General Plan Buildout Alternative would differ from the proposed Specific Plan in the following ways.

- The No Project-General Plan Buildout Alternative would encompass only the area that is currently within the Baylands Subarea (see existing General Plan in **Figure 3-3**).
- Sierra Point Parkway would not be extended north from its current terminus at the US 101 freeway southbound off-ramps.
- Lagoon Road would remain in its current alignment and not be realigned to the north to terminate at the US 101 freeway southbound off-ramps.
- Green Shared Streets would not be added to the roadway types identified in the General Plan Circulation Element and would therefore be replaced by standard local streets.

b. Land Development Alternatives

The land development alternatives described and analyzed in this EIR are each based on the assumption that the Specific Plan described in Chapter 3 and analyzed in Chapter 4 would be modified. As shown in **Table ES-2**, each of the seven land development alternatives to the Specific Plan were developed based on different ways of distributing development around the Baylands. Alternatives 1-3 analyze the effects of redistributing proposed Specific Plan development (2,200 dwelling units, 6.5 million s.f. of commercial, 500,000 s.f. of hotel use) around the Baylands, while Alternatives 4-7 analyze the effects of both redistributing and reducing the amount of residential and commercial development that would be permitted within the Baylands.

Table ES-3 provides a summary comparison of the impacts of each of the alternatives analyzed above to those of the Baylands Specific Plan.

Table ES-2: Land Development Alternatives Analyzed in Addition to No Project Alternatives

	Proposed Density Alternatives			Reduced Density Alternatives			
	1. Development around an Operating 45-Acre Light Maintenance Facility (LMF)	**2. Balanced Commercial**	**3. Reduced Maximum Building Heights**	**4. Reduced Commercial Development**	**5. Development around an Operating 45-Acre Light Maintenance Facility (LMF)**	**6. Balanced Commercial**	**7. Reduced Maximum Building Heights**
Housing	2,200 dwelling units west of Caltrain, north of Main Street. (same as Specific Plan)	2,200 dwelling units west of Caltrain, north of Main Street. (same as Specific Plan)	2,200 dwelling units west of Caltrain, north of Main Street. (same as Specific Plan)	2,200 dwelling units west of Caltrain, north of Main Street. (same as Specific Plan)	1,800 dwelling units west of Caltrain, north of Main Street. (same as Specific Plan)	1,800 dwelling units west of Caltrain, north of Main Street. (same as Specific Plan)	1,800 dwelling units west of Caltrain, north of Main Street. (same as Specific Plan)
Commercial Development (west of Caltrain)	4.0 million s.f. commercial office 500,000 s.f. hotel (same as Specific Plan)	3.6 million s.f. commercial office 500,000 s.f. hotel (same locations as Specific Plan)	4.0 million s.f. commercial office 500,000 s.f. hotel (same as Specific Plan)	2.8 million s.f. commercial office 350,000 s.f. hotel (same locations as Specific Plan)	2.8 million s.f. commercial office 350,000 s.f. hotel. (concentrated along Geneva Ave. and Sierra Point Pkwy.)	2.6 million s.f. commercial office 350,000 s.f. hotel (same locations as Specific Plan)	2.8 million s.f. commercial office 350,000 s.f. hotel (concentrated along Geneva Ave. and Sierra Point Pkwy.)
Commercial Development (east of Caltrain)	2.5 million s.f. commercial office (same as Specific Plan)	2.9 million s.f. commercial office (same locations as Specific Plan)	2.5 million s.f. commercial office (same as Specific Plan)	1.7 million s.f. commercial office (concentrated on Geneva Ave and Sierra Point Pkwy)	1.7 million s.f. commercial office (concentrated on Geneva Ave and Sierra Point Pkwy)	1.9 million s.f. commercial office (same locations as Specific Plan)	1.7 million s.f. of commercial office (same as Specific Plan)
Maximum Building Heights	Same as Specific Plan (permits 20+ story buildings)	12-story max. for commercial office 8-story max. for housing	12-story max. for commercial office 8-story max. for housing	12-story max. for commercial office 8-story max. for housing	Same as Specific Plan (permits 20+ story buildings)	12-story max. for commercial office 8-story max. for housing	12-story max. for commercial office 8-story max. for housing
High-Speed Rail Light Maintenance Facility (LMF)	Relocates development outside of an operating 45-acre LMF footprint.	Could relocate development outside of an operating 45-acre LMF footprint.	Does not include high-speed rail LMF.	Could relocate development outside of an operating 45-acre LMF footprint.	Relocates development outside of an operating 45-acre LMF footprint.	Could relocate development outside of an operating 45-acre LMF footprint.	Does not include high-speed rail LMF.

	Proposed Density Alternatives			Reduced Density Alternatives			
	1. Development around an Operating 45-Acre Light Maintenance Facility (LMF)	**2. Balanced Commercial**	**3. Reduced Maximum Building Heights**	**4. Reduced Commercial Development**	**5. Development around an Operating 45-Acre Light Maintenance Facility (LMF)**	**6. Balanced Commercial**	**7. Reduced Maximum Building Heights**
Roadways west of Caltrain	Same as Specific Plan.	Same as Specific Plan.	Same as Specific Plan.	Same as Specific Plan.	Same as Specific Plan.	Same as Specific Plan.	Same as Specific Plan.
Roadways east of Caltrain	Realigns Tunnel Ave. to the east. Otherwise, same as Specific Plan.	Same as Specific Plan. Could include realignment of Tunnel Ave. to the east to allow for a 45-acre high speed rail LMF.	Same as Specific Plan.	Same as Specific Plan. Could include realignment of Tunnel Ave. to the east to allow for a 45-acre high speed rail LMF.	Realigns Tunnel Ave. to the east. Otherwise, same as Specific Plan.	Same as Specific Plan. Could include realignment of Tunnel Avenue to the east to allow for a 45-acre high speed rail LMF.	Same as Specific Plan.
Infrastructure west of Caltrain	Same as Specific Plan.	Same as Specific Plan.	Same as Specific Plan.	Same as Specific Plan.	Same as Specific Plan.	Same as Specific Plan.	Same as Specific Plan.
Infrastructure east of Caltrain	Shifts water recycling and water storage tank to the east of Tunnel Ave.	Same as Specific Plan unless water recycling and water storage tank are shifted east for LMF.	Same as Specific Plan.	Same as Specific Plan unless water recycling and water storage tank are shifted east for LMF.	Shifts water recycling and water storage tank to the east of Tunnel Ave.	Same as Specific Plan unless water recycling and water storage tank are shifted east for LMF.	Same as Specific Plan.
Parks/Habitat Restoration west of Caltrain	Same as Specific Plan.	Same as Specific Plan.	Same as Specific Plan.	Same as Specific Plan.	Same as Specific Plan.	Same as Specific Plan.	Same as Specific Plan.
Parks/Habitat Restoration east of Caltrain	< 3-acre reduction in Visitacion Creek to allow for 45-acre LMF.	Same as Specific Plan unless Tunnel Avenue is realigned to allow for 45-acre LMF.	Same as Specific Plan.	Same as Specific Plan unless Tunnel Avenue is realigned to allow for 45-acre LMF.	< 3-acre reduction in Visitacion Creek to allow for 45-acre LMF.	Same as Specific Plan unless Tunnel Avenue is realigned to allow for 45-acre LMF.	Same as Specific Plan.

	Proposed Density Alternatives			Reduced Density Alternatives			
	1. Development around an Operating 45-Acre Light Maintenance Facility (LMF)	**2. Balanced Commercial**	**3. Reduced Maximum Building Heights**	**4. Reduced Commercial Development**	**5. Development around an Operating 45-Acre Light Maintenance Facility (LMF)**	**6. Balanced Commercial**	**7. Reduced Maximum Building Heights**
Renewable Energy Generation; Energy Conservation	Same generation as proposed Specific Plan. Development to meet CALGreen Tier 2 standards.	Same as proposed Specific Plan. Development to meet CALGreen Tier 2 standards.	Same as proposed Specific Plan. Development to meet CALGreen Tier 2 standards.	Increased generation from expanded solar farm. Development to meet CALGreen Tier 2 standards.	Increased generation from expanded solar farm. Development to meet CALGreen Tier 2 standards.	Same as proposed Specific Plan. Development to meet CALGreen Tier 2 standards.	Same as proposed Specific Plan. Development to meet CALGreen Tier 2 standards.
Sustainable Infrastructure	Same as Specific Plan except: • Utility-scale battery storage would be shifted to the north side of Geneva Ave. east of Caltrain. • Water recycling facility would be shifted to the east side of Tunnel Ave.	Same as Specific Plan unless Tunnel Ave. is realigned, in which case: • Utility-scale battery storage would be shifted to the north side of Geneva Ave. east of Caltrain. • Water recycling facility would be shifted to the east side of Tunnel Ave.	Same as proposed Specific Plan.	Same as Specific Plan unless Tunnel Ave. is realigned, in which case: • Utility-scale battery storage would be shifted to the north side of Geneva Ave. east of Caltrain. • Water recycling facility would be shifted to the east side of Tunnel Ave.	Same as Specific Plan except: • Utility-scale battery storage would be shifted to the north side of Geneva Ave. east of Caltrain. • Water recycling facility would be shifted to the east side of Tunnel Ave.	Same as Specific Plan unless Tunnel Ave. is realigned, in which case: • Utility-scale battery storage would be shifted to the north side of Geneva Ave. east of Caltrain. • Water recycling facility would be shifted to the east side of Tunnel Ave.	Same as proposed Specific Plan.

Table ES-3: Summary Comparison of Impacts That Would Result from the Specific Plan, No Project-No Build, and Land Development Alternatives

	Comparison of Alternatives Impacts to Specific Plan Impacts									
		No Project Alternatives		Proposed Density Alternatives			Reduced Density Alternatives			
	Specific Plan	No Build	General Plan Buildout	1. Development Around an Operating 45-Acre LMF	2. Balanced Commercial	3. Reduced Maximum Building Height	4. Reduced Commercial Development	5. Development Around an Operating 45-Acre LMF	6. Balanced Commercial	7. Reduced Maximum Building Height
Land Use and Planning Policies										
Physical Division of Existing Community										
(construction)	LTS w/Mit.	Reduced (No Impact)	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar
(operations)	LTS	Reduced (No Impact)	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar
Consistency w/ Relevant Plans	LTS w/Mit.	Increased (does not implement General Plan)	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar
Socioeconomic Effects										
Inducement of Unplanned Growth	LTS	Increased (requires new housing outside Baylands)	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar
Displacement of Housing and Businesses	LTS	Reduced (No Impact)	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar
Housing for All Economic Segments of the Community	LTS	Increased (requires new housing outside Baylands)	Similar	Similar	Similar	Similar	Similar	Increased	Increased	Increased

	Comparison of Alternatives Impacts to Specific Plan Impacts									
		No Project Alternatives		Proposed Density Alternatives			Reduced Density Alternatives			
	Specific Plan	No Build	General Plan Buildout	1. Development Around an Operating 45-Acre LMF	2. Balanced Commercial	3. Reduced Maximum Building Height	4. Reduced Commercial Development	5. Development Around an Operating 45-Acre LMF	6. Balanced Commercial	7. Reduced Maximum Building Height
Urban Decay	LTS	Reduced (No Impact)	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar
Aesthetic and Visual Resources										
Public Views of Scenic Resources	LTS w/Mit.	Reduced (No Impact)	Similar	Similar	Similar	Reduced (due to lower building heights)	Similar	Reduced (due to reduced density and building height)	Reduced (due to reduced density and building height)	Reduced (due to reduced density and building height)
Impacts on Scenic Resources	LTS w/Mit.	Reduced (No Impact)	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar
Consistency with Visual Quality Policies	LTS w/Mit.	Reduced (No Impact)	Similar	Similar	Similar	Similar	Reduced (due to reduced building heights and commercial square footage)	Similar	Similar	Similar
Nighttime Lighting	LTS w/Mit.	Reduced (No Impact)	Similar	Similar	Similar	Similar	Similar	Reduced (due to less lighted area)	Similar	Similar
Daytime Glare	LTS w/Mit.	Reduced (No Impact)	Similar	Similar	Similar	Similar	Reduced (due to less glare-producing area)	Reduced (due to less glare-producing area)	Reduced (due to less glare-producing area)	Reduced (due to less glare-producing area)

	Comparison of Alternatives Impacts to Specific Plan Impacts									
	Specific Plan	No Project Alternatives		Proposed Density Alternatives			Reduced Density Alternatives			
		No Build	General Plan Buildout	1. Development Around an Operating 45-Acre LMF	2. Balanced Commercial	3. Reduced Maximum Building Height	4. Reduced Commercial Development	5. Development Around an Operating 45-Acre LMF	6. Balanced Commercial	7. Reduced Maximum Building Height
Biological Resources										
Candidate, Sensitive, and Special-Status Plants, Animals, and Habitats	LTS w/Mit.	Reduced (No Impact)	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar
Wetlands and Non-Wetland Waters Acreage, Functions, and Values	LTS w/Mit.	Reduced (No Impact)	Increased (due to lack of habitat restoration at Lagoon Park)	Similar	Similar	Similar	Similar	Similar	Similar	Similar
Movement of Fish and Wildlife Species	LTS w/Mit.	Reduced (No Impact)	Similar	Similar	Similar	Similar	Reduced (due to reduced building glass area)	Reduced (due to reduced building glass area)	Reduced (due to reduced building glass area)	Reduced (due to reduced building glass area)
Consistency with Brisbane Municipal Code Chapter 12.12, Private Tree Regulations	LTS	Reduced (No Impact)	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar
Consistency with San Bruno Mountain Habitat Conservation Plan	LTS w/Mit.	Reduced (No Impact)	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar

	Comparison of Alternatives Impacts to Specific Plan Impacts									
		No Project Alternatives		Proposed Density Alternatives			Reduced Density Alternatives			
	Specific Plan	No Build	General Plan Buildout	1. Development Around an Operating 45-Acre LMF	2. Balanced Commercial	3. Reduced Maximum Building Height	4. Reduced Commercial Development	5. Development Around an Operating 45-Acre LMF	6. Balanced Commercial	7. Reduced Maximum Building Height
Cultural and Tribal Cultural Resources										
Historic Resources (Roundhouse and Machinery & Equipment Buildings)	LTS w/Mit.	**Increased (due to Roundhouse deterioration) SU**	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar
Archaeological Resources	LTS w/Mit.	Reduced (No Impact)	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar
Tribal Cultural Resources	No Impact	Similar (No Impact)	Similar (No Impact)	Similar (No Impact)	Similar (No Impact)	Similar (No Impact)	Similar (No Impact)	Similar (No Impact)	Similar (No Impact)	Similar (No Impact)
Disturbance of Human Remains	LTS	Reduced (No Impact)	Similar	Similar	Similar	Similar	Similar	Reduced (due to less excavation)	Reduced (due to less excavation)	Similar
Transportation										
Vehicle Miles Traveled	LTS	Increased (due to development outside Baylands)	Increased (due to differences in travel routes)	Similar	Increased (due to less transit use by Baylands employees)	Increased (due to less transit use by Baylands employees)	Increased (due to less transit, bicycle, and pedestrian travel)	Increased (due to less transit use)	Increased (due to less transit use)	Increased (due to less transit use)
Transit, Bicycle, and Pedestrian Travel	LTS w/Mit.	Reduced (No Impact)	Similar	Similar	Increased (due to less transit use by Baylands employees)	Increased (due to less transit use by Baylands employees)	Increased (due to less transit, bicycle, and pedestrian travel)	Similar	Increased (due to less transit use)	Increased (due to less transit use)

	Comparison of Alternatives Impacts to Specific Plan Impacts									
		No Project Alternatives		Proposed Density Alternatives			Reduced Density Alternatives			
	Specific Plan	No Build	General Plan Buildout	1. Development Around an Operating 45-Acre LMF	2. Balanced Commercial	3. Reduced Maximum Building Height	4. Reduced Commercial Development	5. Development Around an Operating 45-Acre LMF	6. Balanced Commercial	7. Reduced Maximum Building Height
Hazards to Vehicles, Bicyclists, and Pedestrians	LTS w/Mit.	Reduced (No Impact)	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar
Emergency Access	LTS w/Mit.	Reduced (No Impact)	Increased (due to differences in travel routes)	Similar	Similar	Similar	Similar	Similar	Similar	Similar
Air Quality										
Emissions of Criteria Air Pollutants	**SU**	Increased (due to development outside Baylands)	**Increased (due to increased travel) SU**	**Similar SU**	**Increased (due to less transit use by Baylands employees) SU**	**Similar SU**	**Increased (due to increased vehicular travel by Baylands employees) SU**	**Similar SU**	**Similar SU**	**Similar SU**
Exposure of Sensitive Receptors to Substantial Pollutant Concentrations	LTS w/Mit.	Reduced (No Impact)	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar
Odors	LTS w/Mit.	Reduced (No Impact)	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar
Consistency with 2017 Regional Clean Air Plan	LTS	Reduced (No Impact)	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar

	Comparison of Alternatives Impacts to Specific Plan Impacts									
	Specific Plan	No Project Alternatives		Proposed Density Alternatives			Reduced Density Alternatives			
		No Build	General Plan Buildout	1. Development Around an Operating 45-Acre LMF	2. Balanced Commercial	3. Reduced Maximum Building Height	4. Reduced Commercial Development	5. Development Around an Operating 45-Acre LMF	6. Balanced Commercial	7. Reduced Maximum Building Height
Greenhouse Gas Emissions										
Specific Plan Area Greenhouse Gas Emissions	**SU**	**Increased (due to travel outside Baylands) SU**	**Increased (due to increased travel) SU**	**Similar SU**	**Increased (due to less transit use by Baylands employees) SU**	**Similar SU**	**Increased (due to increased vehicular travel by Baylands employees) SU**	**Reduced (due to reduced emissions) SU**	**Reduced (due to reduced emissions) SU**	**Reduced (due to reduced emissions) SU**
Effect on Regional Greenhouse Gas Emissions	LTS	Reduced (No Impact)	**Increased (due to increased travel)**	Similar	Similar	Similar	**Increased (due to less transit use by Baylands employees)**	**Increased (due to less transit use by Baylands employees)**	**Increased (due to less transit use by Baylands employees)**	**Increased (due to less transit use by Baylands employees)**
Consistency with Greenhouse Gas Reduction Plans, Policies, Standards, and Regulations	LTS w/Mit.	Reduced (No Impact)	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar
Energy Resources										
Wasteful, Inefficient, or Unnecessary Use of Energy	LTS	Increased (due to development outside Baylands)	Increased (due to increased travel)	Similar	Similar	Similar	Similar	Reduced (due to reduced demand and increased solar energy generation)	Reduced (due to reduced demand)	Reduced (due to reduced demand)

	Comparison of Alternatives Impacts to Specific Plan Impacts									
	Specific Plan	No Project Alternatives		Proposed Density Alternatives			Reduced Density Alternatives			
		No Build	General Plan Buildout	1. Development Around an Operating 45-Acre LMF	2. Balanced Commercial	3. Reduced Maximum Building Height	4. Reduced Commercial Development	5. Development Around an Operating 45-Acre LMF	6. Balanced Commercial	7. Reduced Maximum Building Height
Consistency with Energy Reduction Plans, Policies, and Programs	LTS w/Mit.	Reduced (No Impact)	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar
Noise and Vibration										
Temporary Ambient Noise Increase during Construction	**SU**	Reduced (No Impact)	**Similar SU**	**Similar SU**	**Similar SU**	**Increased (due to more pile driving) SU**	**Reduced (due to less pile driving) SU**	**Reduced (due to less pile driving and less development near sensitive receptors) SU**	**Reduced (due to less development near sensitive receptors) SU**	**Reduced (due to less pile driving) SU**
Permanent Ambient Noise Increase from Stationary Sources	**SU**	Reduced (No Impact)	**Similar SU**	**Similar SU**	**Similar SU**	**Similar SU**	**Similar SU**	**Similar SU**	**Similar SU**	**Similar SU**
Traffic Noise Increase	**SU**	Reduced (No Impact)	**Increased (due to differences in travel routes) SU**	**Similar SU**	**Similar SU**	**Similar SU**	**Similar SU**	**Reduced (due to less traffic) SU**	**Reduced (due to less traffic) SU**	**Reduced (due to less traffic) SU**

	Comparison of Alternatives Impacts to Specific Plan Impacts									
		No Project Alternatives		Proposed Density Alternatives			Reduced Density Alternatives			
	Specific Plan	No Build	General Plan Buildout	1. Development Around an Operating 45-Acre LMF	2. Balanced Commercial	3. Reduced Maximum Building Height	4. Reduced Commercial Development	5. Development Around an Operating 45-Acre LMF	6. Balanced Commercial	7. Reduced Maximum Building Height
Exposure of People to Railroad, Freeway, and Airport Noise	LTS w/Mit.	Reduced (No Impact)	Similar	Reduced (due to LMF separating offices from rail line)	Similar	Reduced (due to less development near rail line)	Reduced (due to less development near rail line)	Reduced (due to fewer sensitive receptors near high-noise areas)	Reduced (due to fewer sensitive receptors near high-noise areas)	Reduced (due to less development near rail line and freeway)
Increase in Groundborne Vibrations	LTS w/Mit.	Reduced (No Impact)	Similar	Similar	Similar	Similar	Reduced (due to less pile driving)	Reduced (due to less pile driving and less development near rail line)	Reduced (due to less pile driving overall and near sensitive receptors)	Reduced (due to less pile driving)
Exposure of People to High Vibration Levels	LTS w/Mit.	Reduced (No Impact)	Similar	Reduced (due to LMF separating offices from rail line)	Similar	Reduced (due to less development subject to existing vibration)	Reduced (due to less development near rail line)	Similar	Similar	Reduced (due to less development near rail line and freeway)
Hazards and Hazardous Materials										
Risks from Transport, Use, Disposal, and Management of Hazardous Materials	LTS w/Mit.	Reduced (No Impact)	Similar	Similar	Similar	Similar	Reduced (due to reduced commercial development intensity)	Reduced (due to reduced development intensity)	Reduced (due to reduced development intensity)	Reduced (due to reduced development intensity)

	Comparison of Alternatives Impacts to Specific Plan Impacts									
		No Project Alternatives		Proposed Density Alternatives			Reduced Density Alternatives			
	Specific Plan	No Build	General Plan Buildout	1. Development Around an Operating 45-Acre LMF	2. Balanced Commercial	3. Reduced Maximum Building Height	4. Reduced Commercial Development	5. Development Around an Operating 45-Acre LMF	6. Balanced Commercial	7. Reduced Maximum Building Height
Health Hazards for Schools due to Release of Hazardous Materials or Proximity to Hazardous Conditions	LTS w/Mit.	Reduced (No Impact)	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar
Development on Listed Hazardous Materials Sites	LTS	Reduced (No Impact)	Similar	Similar	Similar	Similar	Similar	Reduced (due to less development on landfill site)	Reduced (due to less development on landfill site)	Similar
Safety Hazard or Excessive Noise from Aircraft Operations	LTS	Reduced (No Impact)	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar
Emergency Preparedness and Response	LTS	Reduced (No Impact)	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar
Hydrology and Water Quality										
Protection of Water Quality	LTS w/Mit.	Reduced (No Impact)	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar
Groundwater Recharge and Sustainable Management	LTS	Reduced (No Impact)	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar

	Comparison of Alternatives Impacts to Specific Plan Impacts									
		No Project Alternatives		Proposed Density Alternatives			Reduced Density Alternatives			
	Specific Plan	No Build	General Plan Buildout	1. Development Around an Operating 45-Acre LMF	2. Balanced Commercial	3. Reduced Maximum Building Height	4. Reduced Commercial Development	5. Development Around an Operating 45-Acre LMF	6. Balanced Commercial	7. Reduced Maximum Building Height
Flood Hazards	LTS w/Mit.	Increased (due to lack of sea level rise adaptation)	Similar	Similar	Similar	Similar	Similar	Similar	Reduced (due to reduced runoff)	Similar
Release of Pollutants due to Flood, Tsunami, Sea Level Rise and Emergent Groundwater, or Seiche	LTS	Increased (due to lack of sea level rise adaptation)	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar
Geology, Soils, and Seismicity										
Fault Rupture	No Impact	Similar (No Impact)	Similar (No Impact)	Similar (No Impact)	Similar (No Impact)	Similar (No Impact)	Similar (No Impact)	Similar (No Impact)	Similar (No Impact)	Similar (No Impact)
Seismic Ground Shaking	LTS	Reduced (No Impact)	Similar	Similar	Similar	Similar	Reduced (due to fewer people subject to risk)	Reduced (due to fewer people subject to risk)	Reduced (due to fewer people subject to risk)	Reduced (due to fewer people subject to risk)
Liquefaction and Seismic-Related Ground Failure	LTS	Reduced (No Impact)	Similar	Similar	Similar	Similar	Reduced (due to fewer commercial buildings)	Similar	Similar	Similar
Slope Instability	LTS w/Mit.	Reduced (No Impact)	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar
Expansive Soils and Soil Corrosivity	LTS	Reduced (No Impact)	Similar	Similar	Similar	Similar	Reduced (due to less building area)	Reduced (due to less building area)	Reduced (due to fewer buildings)	Similar

	Comparison of Alternatives Impacts to Specific Plan Impacts									
		No Project Alternatives		Proposed Density Alternatives			Reduced Density Alternatives			
	Specific Plan	No Build	General Plan Buildout	1. Development Around an Operating 45-Acre LMF	2. Balanced Commercial	3. Reduced Maximum Building Height	4. Reduced Commercial Development	5. Development Around an Operating 45-Acre LMF	6. Balanced Commercial	7. Reduced Maximum Building Height
Paleontological Resources	LTS w/Mit.	Reduced (No Impact)	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar
Use of Septic Tanks or Alternative Wastewater Disposal Systems	No Impact	Similar (No Impact)	Similar (No Impact)	Similar (No Impact)	Similar (No Impact)	Similar (No Impact)	Similar (No Impact)	Similar (No Impact)	Similar (No Impact)	Similar (No Impact)
Utilities, Service Systems, and Water Quality										
Water Supply	LTS	Reduced (No Impact)	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar
Construction, Relocation, or Improvement of Utilities	LTS	Reduced (No Impact)	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar
Consistency with Solid Waste Management Policies	LTS	Reduced (No Impact)	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar
Landfill Capacity	LTS	Reduced (No Impact)	Similar	Similar	Similar	Similar	Reduced (due to less solid waste)	Reduced (due to less solid waste)	Reduced (due to less solid waste)	Reduced (due to less solid waste)
Public Services and Facilities										
New or Altered Public Facilities	LTS w/Mit.	Reduced (No Impact)	Similar	Similar	Similar	Similar	Reduced (due to reduced demand for services)	Reduced (due to reduced demand for services)	Similar	Similar

	Comparison of Alternatives Impacts to Specific Plan Impacts									
		No Project Alternatives		Proposed Density Alternatives			Reduced Density Alternatives			
	Specific Plan	**No Build**	**General Plan Buildout**	**1. Development Around an Operating 45-Acre LMF**	**2. Balanced Commercial**	**3. Reduced Maximum Building Height**	**4. Reduced Commercial Development**	**5. Development Around an Operating 45-Acre LMF**	**6. Balanced Commercial**	**7. Reduced Maximum Building Height**
Recreation Resources										
Physical Deterioration of a Park or Recreational Facility	LTS w/Mit.	Reduced (No Impact)	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar
Physical Deterioration of Candlestick Point Windsurfing Resources	LTS	Reduced (No Impact)	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Reduced (due to reduced building heights)
Wildland Fire										
Wildland Fire Potential	LTS	Reduced (No Impact)	Similar	Similar	Similar	Similar	Reduced (due to fewer people)	Reduced (due to fewer people)	Reduced (due to fewer people)	Reduced (due to fewer people)
Conclusions										
Achieve Project Objectives?	Yes	**No**	Yes but to a lesser degree	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Overall Comparison to Project Impacts		Reduced	Increased	Similar	Similar	Reduced	Reduced	Reduced	Reduced	Reduced

NOTE: **Bold text** indicates significant unavoidable impact.

LTS = less than significant

LTS w/Mit. = less than significant with mitigation incorporated

SU = significant unavoidable

ES.6.2 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA requires that an EIR identify an environmentally superior alternative. If the No Project Alternative is identified as the environmentally superior alternative, the EIR must also identify an environmentally superior alternative from among the other alternatives (CEQA Guidelines Section 15126.6(e)(2)). The environmentally superior alternative for the Baylands considers both the number of significant impacts each alternative would generate as well as the relative severity of each alternative's adverse environmental effects.

The Reduced Density, Lower Maximum Building Height Development Alternative, which would provide for development of 1,800 dwelling units, 4.5 million square feet of commercial office and 500,000 square feet of hotel use, while reducing the maximum allowable building heights within the Baylands to 12 stories for commercial office and 8 stories for residential development, would be the environmentally superior alternative for Baylands land development. This alternative would have the least overall adverse effect on the physical environment in comparison to the Specific Plan and the alternatives evaluated in this Draft EIR. Reduced Density, Lower Maximum Building Height development would have the following effects on the significant unavoidable impacts of the Specific Plan:

Impact AQ-1: The Baylands Specific Plan would cause a net increase in emissions of non-attainment criteria pollutants (ROG, NO_X, $PM_{2.5}$, PM_{10},) exceeding BAAQMD Regional Criteria Pollutant Significance Thresholds during construction and for operations at the completion of Phase 1 development, as well as at full Specific Plan buildout.

Lowering building heights while simultaneously reducing the amount of residential and commercial development as the Specific Plan would reduce overall mobile source pollutant emissions for project operations.

Impact GHG-1: The Baylands Specific Plan would cause an increase in total greenhouse gas (GHG) emissions generated within the Baylands.

Lowering building heights to reduce Baylands development by 400 dwelling units and 2.5 million s.f. of commercial office use would reduce the Specific Plan's net increase of GHG emissions.

Impact NOI-1: The use of impact pile driving for construction of buildings over 5 stories in height or for the Geneva Avenue bridge in proximity to occupied residential and office buildings would cause unavoidable adverse effects, particularly if multiple pile driving activities were undertaken within the Baylands at the same time, until construction of such buildings is completed.

Lowering the heights of taller buildings while simultaneously reducing the Specific Plan's overall development intensity could decrease the number of buildings that would require pile foundations. In addition, reduced building heights could enhance the feasibility of constructing pile foundations using quieter technologies.

Impact NOI-2: The aggregate operation of all stationary noise sources would increase noise levels generated within the Specific Plan area as a whole. Because the exact future location and configuration for all of these sources cannot be known at this time, it is not possible to ensure that the aggregate increase in noise levels at specific off-site receptor locations from stationary sources would not result in a permanent noise increase in excess of 5 dBA L_{eq}.

Due to the logarithmic scale used to measure noise, reducing development intensity would not likely be sufficient to substantially reduce permanent increases in ambient noise compared to the Specific Plan.

Impact NOI-3: Increased noise levels from Baylands-generated traffic would exceed applicable standards along one roadway segment at the conclusion of Phase 1 development (assumed to occur in 2035), increasing to 3 roadway segments at full Specific Plan buildout (assumed to be 2040).

Lower Maximum Building Height (Reduced Density) development would generate less traffic than the Specific Plan, while retaining direct access to the US 101 freeway Candlestick interchange. As a result, the amount of traffic along area roadways would decrease, reducing significant unavoidable impacts of the Specific Plan, although not to a less than significant level.

Additional effects of the Reduced Density, Lower Maximum Building Height Alternative include:

- Reducing the Specific Plan's overall impacts.
- Eliminating the Specific Plan's proposed 20+ story towers.
- Retaining variation in building heights and lower density residential and office building types (single family, duplex, townhouse) without increasing the number of buildings requiring pile driving for building foundations.
- Expanding the 55-acre solar farm and generating a greater proportion of the Baylands electrical demand onsite compared to Project Density alternatives.

ES.7 AREAS OF CONTROVERSY

CEQA Guidelines Section 15123 specifies that the EIR summary shall identify "areas of controversy" known to the Lead Agency, including issues raised by agencies and the public, and issues to be resolved, including the choice among alternatives and whether or how to mitigate the significant effects. To date, the following areas of controversy and issues to be resolved have been identified.

ES.7.1 ISSUES TO BE RESOLVED

CEQA Guidelines Section 15123(b)(3) requires that an EIR disclose issues to be resolved including the choice among alternatives and whether or how to mitigate significant impacts. In relation to the Baylands Specific Plan, key issues to be resolved include:

1. Whether this Draft EIR adequately describes the physical environmental effects (impacts) of the 2025 Specific Plan and other project components, including measures to avoid or minimize significant environmental effects.
2. Whether the Specific Plan and other project components with or without modifications are consistent with the provisions of the Brisbane General Plan, including General Plan Amendments GP-1-18 and GP-1-19, as well as consistent with Measure JJ.
3. Whether the Specific Plan and other project components appropriately incorporate mitigation measures identified in the certified Program EIR for the Baylands.
4. Whether there are any alternatives to the Specific Plan or other project components that would substantially lessen any of its significant impacts and achieve the underlying purpose and most but not necessarily all of the Specific Plan objectives identified in this EIR.
5. Whether the benefits of Baylands development outweigh the significant environmental impacts of Specific Plan development that cannot be feasibly avoided or mitigated to a level of insignificance.
6. Based on the above, whether the Specific Plan and related actions should be adopted, with or without modifications.

ES.7.2 AREAS OF CONTROVERSY

An NOP for this Draft EIR was released on February 20, 2020, opening a 60-day public review period. A scoping meeting was held for the Draft EIR on March 4, 2020. Due to subsequent changes to the Specific Plan and infrastructure proposed by the applicant, the NOP was recirculated for a 30-day public review that started on April 26, 2023, during which a second scoping meeting was held (May 9, 2023). Based on the history of comments received from the public and agencies during the review of the Program EIR, public hearings leading to the

adoption of GP-1-18 and GP-1-19, and comments received on the NOP and updated NOP, the primary areas of controversy include the following (with Draft EIR section(s) addressing these issues in parentheses):

- Compatibility of proposed high-density development with the existing Brisbane community and adjacent residential neighborhoods in San Francisco, along with changes in the character of the Baylands (Chapter 3, *Project Description*; Section 4.3, *Land Use and Planning Policies*; Section 4.4, *Aesthetic and Visual Resources*)
- Proposed development of 20+ story residential and office towers along the west side of the Caltrain line. (Chapter 3, *Project Description*; Section 4.4, *Aesthetic and Visual Resources*)
- Residential development needed to comply with Regional Housing Needs Allocation occurring on lands within the former Southern Pacific railyard that are contaminated with hazardous materials and subject to remediation pursuant to the regulatory authority of state agencies. (Chapter 2, *General Environmental and Planning Context*; Chapter 3, *Project Description*; Section 4.13, *Hazards and Hazardous Materials*)
- Commercial development on the former Brisbane Landfill subject to final landfill closure pursuant to the regulatory authority of state and county agencies. (Chapter 2, *General Environmental and Planning Context*; Chapter 3, *Project Description*; Section 4.13, *Hazards and Hazardous Materials*)
- Availability of a water supply to serve proposed Baylands development and impacts associated with the proposed California Water Company supply, including construction of off-site recycled water lines. (Chapter 3, *Project Description*; Section 4.16, *Utilities, Service Systems, and Water Supply*)
- Potential impacts on existing biological habitats and implementation of identified mitigation measures (Chapter 3, *Project Description*; Section 4.6, *Biological Resources*)
- Adaptation to sea level rise and water quality impacts on the Brisbane Lagoon and San Francisco Bay (Chapter 2, *General Environmental and Planning Context*; Section 4.6, *Biological Resources*, and Section 4.14, *Hydrology and Water Quality*)
- Traffic that would be generated by proposed Baylands development. (Section 4.8, *Transportation*)
- Air pollutant and greenhouse gas emissions impacts, including emission of toxic air contaminants (Section 4.9, *Air Quality*, and Section 4.10, *Greenhouse Gas Emissions*)
- Noise during construction (in particular, the use of impact pile driving) and post-construction operations (Section 4.12, *Noise and Vibration*)
- Potential for liquefaction and ability of soils to safely support mid- and high-rise structures (Section 4.15, *Geology, Soils, and Seismicity*)

- Adequacy of existing and proposed public infrastructure, facilities, and services for the Baylands (Section 4.16, *Utilities, Services Systems, and Water Supply*, and Section 4.17, *Public Services and Facilities*)
- Availability of active recreational facilities and effects on windsurfing resources within the Candlestick Point State Recreation Area (Section 4.18, *Parks, Open Space/Open Areas, and Recreational Resources*)
- Relationship between the Baylands Specific Plan and the California High Speed Rail Authority's proposed light maintenance facility within the Baylands (Chapter 2, *General Environmental and Planning Context*, Chapter 8, *Alternatives)*

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CHAPTER 1 INTRODUCTION

This environmental impact report ("EIR") has been prepared by the City of Brisbane ("City") as the Lead Agency in conformance with the California Environmental Quality Act ("CEQA") (Public Resources Code Section 21000 et seq.) and CEQA Guidelines (California Code of Regulations, Title 14, Division 6, Chapter 3, Section 15000 et seq.). Its purpose is to identify, analyze, and mitigate the significant environmental effects that would result from development of the 2025 Baylands Specific Plan ("Specific Plan") and related components (collectively referred to as "2025 Specific Plan project." Sunquest Properties, Inc. ("Sunquest") and its development manager, Baylands Development, Inc. (BDI), are collectively referred to as the "applicant."

Significant Environmental Impacts (CEQA Guidelines Section 15126(a))

"An EIR shall identify and focus on the significant effects of the proposed project on the environment. In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced."

In addition to addressing the physical environmental impacts of a project, CEQA Guidelines Section 15126.2(a) also requires that an EIR "also analyze any significant environmental effects the project might cause or risk exacerbating by bringing development and people into the area affected."

As stated by the court in *California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal. 4th 369, "[W]hen a proposed project risks exacerbating those environmental hazards or conditions that already exist, an agency must analyze the potential impact of such hazards on future residents or users. In those specific instances, it is the project's impact on the environment — and not the environment's impact on the project —that compels an evaluation of how future residents or users could be affected by exacerbated conditions." (Id. at 377–378.)

1.1 OVERVIEW OF THE BAYLANDS SPECIFIC PLAN

1.1.1 PROJECT LOCATION

The Baylands Specific Plan area ("Specific Plan area," "Baylands," "Baylands site," or "site") encompasses approximately 680.1 acres (558.3 acres of existing land area[28] and 121.8 acres of lagoon) within the City of Brisbane in northeast San Mateo County. The Baylands is located along the west side of San Francisco Bay adjacent to US Highway 101 ("US 101"), immediately south of the City and County of San Francisco (see **Figure 1-1**).

[28] Approximately 26 acres of existing land area are subject to sea level rise and will experience daily inundation by the year 2100, reducing the Baylands' land area to 532.3 acres.

Figure 1-1: Regional Location

SOURCE: Metis Environmental Group, 2024

1.1.2 PROPOSED BAYLANDS DEVELOPMENT

The Baylands Specific Plan proposes development of 2,200 residential units; 6.5 million square feet of commercial, office, retail, conference, life science, and office campus uses; 500,000 square feet of hotel use (approximately 800 rooms); a grade 6–8 middle school; and open space/open area, parks, and trails within the 680.1-acre site. The Specific Plan also proposes extensive potable water, recycled water, sewer, drainage, electrical, and other utilities improvements. Approximately 157 acres of the site's 532.3-acre Year 2100 land area (29.5 percent) are proposed to be devoted to conservation and outdoor recreation.

Residential uses would be clustered in the northwestern portion of the site in proximity to the Bayshore Caltrain station. The land use character in the northern portion of the Baylands would be transit-oriented with the highest intensity development, including residential uses combined with a mix of retail, commercial, a major office cluster, hotels, and entertainment uses. The primary focus in the west-central portion of the site around the historic Roundhouse, which is to be restored for adaptive reuse, would be on lower density housing, a middle school, and

campus-style office development. Lower density commercial office and infrastructure uses would be provided within the eastern portion of the site.

Baylands development includes several components that require approval from the City of Brisbane and other agencies, including:

- **City of Brisbane**
    - General Plan Land Use Element Amendment to:
        - Adjust the northerly boundary of the Baylands Subarea to reflect the northern boundary of the Specific Plan area east of the Caltrain right-of-way.
        - Change the land use designation for the portion of the Baylands Specific Plan currently within the Beatty Subarea from Heavy Commercial to Baylands Planned Development, Residential Prohibited.
    - General Plan Circulation Element Amendment to:
        - Realign Lagoon Avenue to provide direct access to the southbound US 101 freeway on- and off-ramps adjacent to the current terminus of Sierra Point Parkway;
        - Extend Sierra Point Parkway from its current terminus at the US 101 freeway on- and off-ramps north to Geneva Avenue;
        - Reflect proposed Baylands roadways on Circulation Element Figure C-3 *Proposed Circulation Improvements*;
        - Designate the Geneva Avenue extension through the Baylands as a Regional Arterial;
        - Add "Green Shared Street" as a roadway type.
    - Approval of the 2025 Baylands Specific Plan, along with:
        - Amendments to Title 17, Zoning, of the Brisbane Municipal Code to establish the land use regulations and development standards set forth in the Baylands Specific Plan as the regulatory authority governing development within the Specific Plan area.
        - Change of Zone from Commercial Mixed-Use (C-1), Marsh Lagoon Bayfront (MLB), Manufacturing (M-1) to Baylands Specific Plan.
    - Bayshore Boulevard Mobility Plan for improvements along Bayshore Boulevard from Geneva Avenue to the southerly Brisbane city limits to facilitate mobility for Brisbane residents and businesses.

  - Relocate Brisbane's existing Fire Station No. 81 from its existing site at 3445 Bayshore Boulevard to a new 2-story, 10,000-square-foot facility at 140 Valley Drive and establish a new fire station within the Baylands.
  - Development Agreement with the City of Brisbane specifying terms and conditions for Baylands development.

- **Other Public Agencies**
  - Acquisition of a water supply by establishing the California Water Service Company as the service agency for the Baylands, Sierra Point, and Beatty Subareas of the City of Brisbane (San Mateo County Local Agency Formation Commission).
  - Development of a grade 6–8 middle school within the Baylands and conversion of the existing grade PK–8 Bayshore School to a grade PK–5 elementary school (Bayshore School District, California Department of Education).

A complete listing of current and future required approvals and permits from the City of Brisbane and other agencies is presented in Chapter 3, *Project Description*, which also provides descriptions of each proposed action.

Baylands Specific Plan area in the foreground with San Bruno Mountain, Brisbane, and Daly City in the background.

1.2 ENVIRONMENTAL REVIEW REQUIREMENTS AND PROCESS

Because it would require discretionary actions by the City of Brisbane and other public agencies, the 2025 Specific Plan and related components constitute a "project" that must be evaluated for its potential to create adverse physical environmental effects. As defined by CEQA (Public Resources Code Section 15002(d), "'project' has been interpreted to mean far more than the ordinary dictionary definition of the term."

Standard for Adequacy of an Impact Report (CEQA Guidelines Section 15151)

"An EIR should be prepared with a sufficient degree of analysis to provide decision makers with information that enables them to make a decision that intelligently takes account of environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection but for adequacy, completeness, and a good faith effort at full disclosure."

CEQA Guidelines Section 15378(a) states that project "means the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment, and that is any of the following:

(1) An activity directly undertaken by any public agency including but not limited to public works construction and related activities clearing or grading of land, improvements to existing public structures, enactment and amendment of zoning ordinances, and the adoption and amendment of local General Plans or elements thereof pursuant to Government Code Sections 65100–65700.

(2) An activity undertaken by a person which is supported in whole or in part through public agency contacts, grants, subsidies, loans, or other forms of assistance from one or more public agencies.

(3) An activity involving the issuance to a person of a lease, permit, license, certificate, or other entitlement for use by one or more public agencies."

1.2.1 PURPOSE AND INTENDED USE OF THIS EIR

Pursuant to the provisions of CEQA Guidelines Section 15121(a), this EIR is intended as an informational document to:

- Inform public agency decision-makers and the general public of the significant environmental effects that would directly or indirectly result from development of the 2025 Baylands Specific Plan project;
- Identify mechanisms to avoid or minimize (mitigate) significant environmental effects, including:
    - Mitigation measures that would become requirements of the Baylands Specific Plan or other requested actions should they be approved; and
    - A reasonable range of alternatives to the Specific Plan and other requested actions as they are currently proposed.

Purpose of an Environmental Impact Report (CEQA Guidelines Section 15121(a))

"An EIR is an informational document which will inform public agency decision-makers and the public generally of the significant environmental effect(s) of a project, identify possible ways to minimize the significant effect(s), and describe reasonable alternatives to the project. The public agency shall consider the information in the EIR along with other information that may be presented to the agency."

The analysis in this EIR builds on the information, analyses, and conclusions provided in the Brisbane Baylands Program EIR certified on July 19, 2018 (State Clearinghouse No. 2006022136), with new and updated information where needed. The prior EIR certified by the City of Brisbane is available at:

- Draft EIR: https://archive.brisbaneca.org/baylands-deir
- Full set of comments on the Draft EIR: https://archive.brisbaneca.org/deir-comments
- Final EIR: https://archive.brisbaneca.org/baylands-final-eir-0

Chapter 9 of this EIR serves as a Subsequent EIR pursuant to CEQA Section 21166 and CEQA Guidelines Section 15162.

This EIR does not recommend approval or denial of the Specific Plan or other requested actions, nor is the EIR intended to determine whether proposed Baylands development is "good" or "bad." The EIR is, as stated above, an informational document intended to identify and avoid or minimize (mitigate) any significant physical environmental effects that might result from the proposed development.

1.2.2 REVIEW PROCESS FOR THE BAYLANDS SPECIFIC PLAN EIR

a. Procedural Steps Undertaken to Date

Procedural steps undertaken to date for the Baylands Specific Plan EIR include:

- **Prepare and Distribute a Notice of Preparation; Conduct a Scoping Meeting.** Pursuant to CEQA Guidelines Section 15063(a), the City of Brisbane, as Lead Agency, determined that an EIR would be required for the Baylands Specific Plan and that preparation of an

Initial Study was therefore not required. On February 20, 2020, the City distributed a Notice of Preparation (NOP) for the EIR opening a 60-day public review period starting on February 20, 2020. Written comments were received from the following parties.

- Deborah Durbin: February 20, 2020
- California Native American Heritage Commission: February 24, 2020
- Bayshore Sanitary District: March 3, 2020
- Michael Barnes: March 4, 2020
- Caltrain: March 16, 2020
- San Francisco International Airport: March 16, 2020
- San Mateo Local Agency Formation Commission (LAFCo): March 17, 2020
- Committee for Renewable Energy in the Baylands (CREBL): March 18, 2020
- California High Speed Rail Authority (CHSRA): March 19, 2020
- San Francisco Bay Conservation and Development Commission (BCDC): March 20, 2020
- California Department of Fish and Wildlife (CDFW): March 20, 2020
- California State Lands Commission: March 20, 2020
- Modesto Irrigation District (MID): March 20, 2020
- Roland Lebrun: March 20, 2020
- Brisbane Complete Streets Safety Committee: March 24, 2020
- Bay Area Air Quality Management District (BAAQMD): April 14, 2020
- John Browning: April 14, 2020
- Prem Lall: April 19, 2020
- Brisbane Open Space and Ecology Committee (OSEC): April 20, 2020
- City and County of San Francisco: April 20, 2020
- California Department of Transportation (Caltrans): April 20, 2020
- Law Offices of Matthew Emrick (Stanislaus Groundwater Appliance): April 20, 2020
- Sierra Club, Loma Prieta Chapter: April 20, 2020
- Tuolumne River Trust: April 20, 2020

Draft EIR Appendix B.1 includes the full text of each of these written comments.

Pursuant to CEQA Guidelines Section 15082(c)(1), the City of Brisbane hosted a public scoping meeting for the Draft EIR on March 4, 2020, to provide an opportunity for members of the public and public agencies to provide input on the scope and content of the environmental information and analysis to be included in the EIR for the proposed Baylands Specific Plan. Issues that members of the public raised at the March 4, 2020, scoping meeting[29] included:

- Site remediation and final landfill closure need to be completed to ensure the safety of future uses within the Baylands.
- Site grading will require movement of a substantial amount of soil, including soil movement from the eastern to the western portion of the Baylands, which could require substantial truck traffic on area streets that are not designed for heavy trucks.
- Provision of off-road Class I bicycle trails is needed and should take priority over on-street bicycle routes and lanes.

- **Prepare and Distribute an Updated Notice of Preparation; Conduct a Scoping Meeting.** Due to changes in Baylands' infrastructure, the City distributed an updated NOP for the EIR opening a 30-day public review period starting on April 26, 2023. A second scoping meeting for the Draft EIR was held on May 9, 2023. A list of the agencies, organizations, and individuals that received the NOP are included in Appendix B.1. along with each of the comments received on the NOP. Comments on the May 2023 NOP were received from:
  - Native American Heritage Commission: April 28, 2023
  - California High Speed Rail Authority: May 23, 2023
  - Hetch Hetchy Regional Water System (San Francisco Public Utilities Commission [SFPUC]): May 24, 2023
  - Dana Dilworth: May 24, 2023
  - Roland Lebrun: May 24, 2023
  - Tuolumne River Trust: May 24, 2023
  - Brisbane Baylands Community Advisory Group (BBCAG): May 25, 2023
  - California Department of Transportation (Caltrans): May 25, 2023
  - Carpenters Union Local 217 San Mateo County: May 25, 2023
  - San Mateo Local Agency Formation Commission (LAFCo): May 25, 2023

[29] Written comments from the 2020 scoping meeting are provided in Appendix B.1.

- Zone 7 Water Agency (Zone 7 of the Alameda County Flood Control and Water Conservation District): May 25, 2023
- Bayshore Sanitary District (BSD): May 26, 2023
- Brisbane Open Space and Ecology Committee (OSEC): No Date
- Contra Costa Water District: September 6, 2023

Appendix B.1 includes the full text of each of the written comments.

- **Prepare the Draft EIR.** This Draft EIR was prepared in accordance with state and local CEQA Guidelines by the City of Brisbane with assistance from a consulting team of environmental planners, engineers, and scientists retained by the City. The consulting team that helped the City prepare the Draft EIR is identified in Chapter 10, *EIR Preparation Staff and Resources*.
- **Prepare a Notice of Availability/Notice of Completion; Distribute the Draft EIR for Agency and Public Review and Comment.** The City filed a Notice of Completion with the State Clearinghouse and prepared a Public Notice of Availability of the Draft EIR on April 3, 2025. During the public review period (April 3, 2025, to September 2, 2025), the City is soliciting input from other agencies and the public regarding the information, analyses, and findings set forth in this Draft EIR. Additional details are included in the published notices.

b. Procedural Steps to Be Undertaken Following the Close of the Draft EIR Public Review Period

Procedural steps to be undertaken following the public review period for this EIR include:

- **Respond to Comments on the Draft EIR and Prepare a Final EIR.** Following the public review period referenced above, a Final EIR will be prepared. The Final EIR will include:
  - The Draft EIR including any revisions;
  - Copies of all written comments received by the City during the Draft EIR public review period;
  - A list of persons and entities providing these comments;
  - Responses to significant environmental issues raised in comments; and
  - Any other additional information deemed necessary by the City as Lead Agency.

  Prior to public hearings held by the Brisbane Planning Commission and City Council, the City will release the proposed Final EIR on its website for agency and public review.

In addition, the City will provide each public agency that commented on the Draft EIR with the City's proposed response to those comments.[30]

- **Consider and Certify the Final EIR as Meeting the Requirements of CEQA.** Prior to making any decision regarding approval of the Specific Plan, other requested actions, or modifications to the Specific Plan or other requested actions, the City, as Lead Agency, is required to certify that the Final EIR was completed in compliance with CEQA; that it was presented to the City Council; that the City Council reviewed and considered the information in the Final EIR prior to approving or approving as modified all or any portion of the Specific Plan; and that the Final EIR reflects the City's independent judgment and analysis (CEQA Guidelines Section 15090).

  CEQA requires the City, as Lead Agency, to undertake the following actions.

  - *Adopt Findings.* In accordance with CEQA Guidelines Section 15091, should the City Council approve or approve as modified the Specific Plan or any other requested action, it is required to make findings, based on substantial evidence, that:
    - Changes or alterations have been required in, or incorporated into, the Specific Plan that avoid or substantially lessen each of the significant environmental effects identified in the Final EIR;
    - Changes or alterations that are within the responsibility and jurisdiction of another public agency and not the City of Brisbane have been adopted by the other agency or can and should be adopted by the other agency; or
    - Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the project alternatives identified in the Final EIR or any additional mitigation measures.
  - *Adopt a Mitigation Monitoring Reporting Program.* At such time as the City makes findings regarding significant effects identified in the EIR, it will also, as required by CEQA Guidelines Section 15097, adopt a Mitigation Monitoring and Reporting Program (MMRP) for mitigation measures that were adopted or made conditions of project approval to mitigate significant effects.

[30] Although CEQA Guidelines Section 15088(b) requires only that each public agency submitting comments on the Draft EIR be provided with the City's proposed response to that agency's comments 10 days prior to certification of the Final EIR, it is the City's intent to publish and distribute the entirety of the Final EIR, including all responses to comments to public agencies that provided comments on the Draft EIR and to make the entirety of the Final EIR available for public review prior to the start of the Planning Commission's public hearings.

- **Make a Decision on the Project.** Following completion and consideration of the Final EIR and public hearings by the Planning Commission and City Council, the City may:

  (1) Approve the 2025 Specific Plan and other actions being considered by the City as initially proposed;

  (2) Approve the 2025 Specific Plan and other actions with one or more revisions, modifications, or conditions of approval;

  (3) Approve with or without revisions, modifications, or conditions of approval one of the project alternatives described in this EIR, with or without approving, or modifying other actions being considered by the City; or

  (4) Disapprove the Specific Plan and its alternatives, while approving, modifying, or disapproving other actions being considered by the City.

  If the City proposes to approve the Specific Plan or other actions requested of the City, either as initially proposed or with modifications, the following additional steps would be undertaken:

  - *Statement of Overriding Considerations.* If Specific Plan development or other actions being considered by the City either as proposed or with modifications would result in one or more unavoidable significant environmental effect, the City would, prior to any approval and as required by CEQA Guidelines Section 15093, prepare and approve a written "Statement of Overriding Considerations" that sets forth the specific economic, legal, social, technological, or other benefits of the Specific Plan or other actions that outweigh their unavoidable environmental effects.
  - *Notice of Determination.* Following any approval, a Notice of Determination (NOD) would be filed by the City with both the County and California State Clearinghouse (in accordance with CEQA Guidelines Section 15094).

1.2.3 AVAILABILITY AND REVIEW OF THE DRAFT EIR

The Baylands Specific Plan Draft EIR is being distributed directly to agencies, organizations, and interested groups and persons for comment during the formal public review period (April 3, 2025, through September 2, 2025) in accordance with CEQA Guidelines Sections 15085, 15086, and 15087. A Notice of Completion and a Notice of Availability of the Baylands Specific Plan Draft EIR were published concurrently with distribution of this document.

In accordance with CEQA Guidelines Section 15204, comments are most helpful when they:

(a) Focus on the sufficiency of the document in identifying and analyzing the possible impacts on the environment and ways in which the significant effects of the project might be avoided or mitigated. Comments are most helpful when they suggest

additional specific alternatives or mitigation measures that would provide better ways to avoid or mitigate the significant environmental effects.

(c) Submit data or references offering facts, reasonable assumptions based on facts, or expert opinion supported by facts in support of the comments.

Comments on the Draft EIR should be sent to:

Mr. John Swiecki, Community Development Director
City of Brisbane
50 Park Place
Brisbane, CA 94005
baylands@brisbaneca.org

1.3 ISSUES TO BE RESOLVED THROUGH THE CEQA AND DEVELOPMENT REVIEW PROCESSES

CEQA Guidelines Section 15123(b)(3) requires that an EIR disclose issues to be resolved, including the choice among alternatives and whether or how to mitigate significant impacts. In relation to the Baylands Specific Plan, key issues to be resolved include:

1. Whether this Draft EIR adequately describes the physical environmental effects (impacts) of the 2025 Specific Plan and other project components, including measures to avoid or minimize significant environmental effects.
2. Whether the Specific Plan and other project components with or without modifications are consistent with the provisions of the Brisbane General Plan, including General Plan Amendments GP-1-18 and GP-1-19, as well as consistent with Measure JJ.
3. Whether the Specific Plan and other project components appropriately incorporate mitigation measures identified in the certified Program EIR for the Baylands.
4. Whether there are any alternatives to the Specific Plan or other project components that would substantially lessen any of its significant impacts and achieve the underlying purpose and most but not necessarily all of the Specific Plan objectives identified in this EIR.
5. Whether the benefits of Baylands development outweigh the significant environmental impacts of Specific Plan development that cannot be feasibly avoided or mitigated to a level of insignificance.
6. Based on the above, whether the Specific Plan and related actions should be adopted, with or without modifications.

1.4 FORMAT OF THE DRAFT EIR

Following Chapter 1, *Introduction*, the Draft EIR is organized as follows:

Chapter 2, *General Environmental and Planning Context*, describes the regional and local context within which the 2025 Specific Plan and other project components are proposed and would be implemented. It discusses previous planning review and environmental documentation undertaken by the City of Brisbane for Baylands development. Chapter 2 describes:

- The Baylands' physical setting and history;
- Current General Plan and zoning designations, land uses, and infrastructure;
- The relationship between the previously certified Brisbane Baylands Program EIR and this EIR.
- The relationship between the proposed Specific Plan and:
    - Approved site remediation and final landfill closure plans, including related requirements of state regulatory agencies for development of the Baylands; and
    - The High-Speed Rail light maintenance facility that is proposed by the California High-Speed Rail Authority within the eastern portion of the Specific Plan area.

Chapter 3, *Project Description*, describes project objectives, the proposed 2025 Specific Plan, and other project components, including on-site and off-site infrastructure. Chapter 3 also identifies the specific City of Brisbane and other public agency approvals and actions required for approval and implementation of the 2025 Specific Plan and other project components.

Chapter 4, *Environmental Setting, Impacts, and Mitigation Measures*, discusses existing conditions; the regulatory context for Baylands development; significance criteria and methodology for determining the significance of impacts; environmental impacts that would directly or indirectly result from the 2025 Specific Plan project; and proposed mitigation measures. This chapter also identifies and provides substantial evidence demonstrating that Specific Plan development would not result in significant impacts for certain environmental issues that therefore need not be examined in detail in this EIR. Finally, this chapter summarizes the Specific Plan's significant unavoidable environmental impacts (those for which implementation of all proposed mitigation measures would not reduce the impact to a less than significant level).

Chapter 5, *Significant Irreversible Environmental Changes*, addresses environmental effects associated with the Baylands Specific Plan that have the potential for irretrievable and irreversible commitment of resources.

Chapter 6, *Growth-Inducing Effects*, describes the Specific Plan's potential to induce growth beyond the development described in the 2025 Specific Plan.

Chapter 7, *Cumulative Environmental Effects*, provides an analysis of the impacts that would result from the combination of the 2025 Specific Plan project together with other past, present, and reasonably foreseeable probable future projects causing related impacts.

Chapter 8, *Alternatives*, provides an analysis of the ability of land development and water supply alternatives to the 2025 Specific Plan project to avoid or reduce the extent of impacts, particularly significant impacts, that would result from Baylands development. As required by CEQA Guidelines Section 15126.6, the alternatives evaluation includes analysis of the No Project Alternative (environmental effects that would result should the 2025 Specific Plan project not be approved), and a discussion of the environmentally superior alternative.

Chapter 9, *Subsequent EIR Analysis and Findings*, evaluates and make findings regarding the extent to which the 2025 Specific Plan project would cause (1) new significant impacts that were not previously identified in the Program EIR or (2) substantially more severe significant impacts than were previously identified in the Program EIR.

Chapter 10, *EIR Preparation Staff and Resources*, identifies the authors of the EIR, including City staff and the EIR consultant team, as well as the organizations and other persons that were consulted during preparation of this EIR.

EIR Appendices

Appendix A 2025 Baylands Specific Plan

Appendix B Notices of Preparation, Distribution List, and Responses to the Notices of Preparation

Appendix C Urban Decay Technical Report

Appendix D Biological Resources Technical Report

Appendix E Cultural Resources Technical Reports

- E.1 Cultural Resources Technical Report
- E.2 Roundhouse Restoration Plan

Appendix F Transportation Technical Reports

- F.1 Transportation Impact Assessment, including Supplemental Design Guidelines for Baylands Roadways and Bayshore Boulevard Mobility Plan
- F.2 Baylands Safe Routes to School Study

Appendix G Air Quality Technical Reports

- G.1 Air Quality Technical Report

G.2 Health Risk Assessment

G.3 Mitigated Air Quality and Health Risk Calculations

Appendix H Greenhouse Gas Emissions

H.1 Greenhouse Gas Emissions Technical Report

H.2 Greenhouse Gas Emissions Mitigated Calculations[31]

Appendix I Energy Resources Technical Report

Appendix J Noise and Vibration Technical Report

Appendix K Hazardous Materials Remediation and Final Landfill Closure Plans

K.1 Operating Unit San Mateo (OU-SM) Remedial Action Plan

K.2 Operating Unit 2 (OU-2) Remedial Action Plan

K.3 Former Brisbane Landfill Closure Plan and Post-Closure Maintenance Plan

K.4 Operable Unit OU-SM Approval Record

K.5 Operable Unit OU-2 Approval Record

K.6 Brisbane Baylands Landfill Closure Plan Approval Record

Appendix L Hydrology Reports

L.1 Sea Level Rise (SLR) Technical Report

L.2 Groundwater Modeling to Evaluate Potential Influence of Sea Level Rise on Groundwater Levels

Appendix M Geotechnical and Paleontological Resources Reports

M.1 Geotechnical Report for the Western Portion of the Baylands

M.2 Geotechnical Report for the Eastern Portion of the Baylands

M.3 Paleontological Resources Report

Appendix N Police and Fire Protection Services Plans

N.1 Police Facilities and Staffing Plan

N.2 Fire Protection Services Plan

Appendix O Wind Analysis

Appendix P Water Supply Assessment

[31] The Baylands GHG Emissions Reduction Plan outlines measures that will be taken to reduce GHG emissions from Baylands construction and operations and is intended to fulfill the role of a Baylands-specific climate action plan consistent with the requirements of CEQA Section 15183.5(b).

1.5 FUTURE ENVIRONMENTAL REVIEW OF SITE-SPECIFIC DEVELOPMENT AND INFRASTRUCTURE PROJECTS

As noted above, this EIR discloses the significant environmental impacts that would result from the 2025 Baylands Specific Plan project in accordance with CEQA and CEQA Guidelines. The environmental impact analyses presented in this EIR are based on the maximum extent and intensity of development permitted by the Baylands Specific Plan, even though future development might ultimately have a smaller footprint or lesser intensity than what is permitted by the Specific Plan.

CEQA Guidelines Section 15182 exempts certain residential, commercial, and mixed-use projects that are consistent with a specific plan that was adopted with a certified EIR from subsequent environmental review, as follows.

- **Residential Projects Implementing Specific Plans (CEQA Guidelines Section 15182(c) and Government Code Section 65457).** These CEQA Guidelines sections would exempt site-specific residential development projects that are undertaken pursuant to and in conformity with the Baylands Specific Plan from environmental review beyond this EIR. Pursuant to CEQA Guidelines Section 15182(c), site-specific residential development projects undertaken pursuant to and in conformity with the Baylands Specific Plan are exempt from further CEQA review unless:
    - Substantial changes are proposed in the project that will require major revisions of the previous EIR due to new significant environmental effects or a substantial increase in the severity of previously identified significant environmental effects;
    - Substantial changes occur with respect to the circumstances under which the project is undertaken will require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;
    - New information of substantial importance, which was not known and could not have been known at the time the previous EIR was certified shows the project will have one or more significant effects not previously discussed, or significant effects previously examined will be substantially more severe than shown in the previous EIR;
    - Mitigation measures or alternatives previously found to not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project; or
    - Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment (CEQA Guidelines Section 15162).

Such projects would, however, be subject to all applicable mitigation measures in the adopted MMRP for the Baylands.

CEQA's environmental review exemption for certain residential projects implemented pursuant to an adopted specific plan aligns with the housing goals of the California Legislature, which has declared that the state is in a housing crisis with high housing costs and a lack of supply. To remedy this crisis, the Legislature passed significant legislation to encourage development, increase high-density neighborhoods, and supply affordable housing. Such housing laws are generally aimed at facilitating and expediting the construction of housing in jurisdictions that are not supplying a sufficient amount and would have implications for processing entitlements related to buildout of the Baylands Specific Plan.

For example, the Housing Accountability Act (Government Code Section 65589.5) establishes the state's overarching policy that a local government may not deny, reduce the density of, or make infeasible residential development projects that are consistent with objective local development standards.[32] Senate Bill (SB) 35 provides a ministerial approval process to streamline the approval of certain housing projects in jurisdictions that are not meeting their Regional Housing Needs Allocation ("RHNA") goals set by California's Department of Housing and Community Development ("HCD"). HCD has determined that the City of Brisbane is such a jurisdiction that has to date made insufficient progress towards providing very low- and low-income housing units. Development in Brisbane, including within the Baylands, is therefore subject to the SB 35 streamlined ministerial approval process for proposed developments that provide at least 50 percent affordability. Similarly, SB 330 streamlines certain housing development projects, shortens the timeframes for approval under the Permit Streamlining Act, and freezes development standards in affected jurisdictions.

SB 35 makes these types of residential projects ministerial, and therefore, CEQA's environmental review requirements do not apply. CEQA only applies to discretionary projects that require the exercise of judgment or deliberation to determine whether the project will be approved, unlike ministerial projects, which only require conformance with a fixed standard or objective measurement and require little or no personal judgment by a public official. Future legislative actions similarly expediting housing approvals using ministerial processes and limiting the City's jurisdiction would have repercussions for the environmental review of future site-specific development and infrastructure projects implementing the Baylands Specific Plan.

[32] Before doing any of these things, local governments must make specified written findings based upon a preponderance of the evidence that a specific, adverse health or safety impact exists. Legislative intent language for the Housing Accountability Act indicates that conditions giving rise to such a specific, adverse impact on public health and safety would occur infrequently.

- **Projects Proximate to Transit (CEQA Guidelines Section 15182(b)).** CEQA also exempts certain transit-oriented residential, commercial, and mixed-use projects that are consistent with an adopted specific plan for which an EIR was certified from environmental review. Such residential or mixed-use projects, or a project with a floor area ratio of at least 0.75 on commercially zoned property, must be:
    - Located within a transit priority area;
    - Consistent with an adopted specific plan for which an environmental impact report was certified; and
    - Consistent with the general land use designation, density, building intensity, and applicable policies specified for the project area in a sustainable communities strategy (CEQA Guidelines Section 15182(b)(1)).

  Subsequent site-specific development projects complying with the requirements that are within ½ miles of the Bayshore Caltrain station could qualify for this exemption

  CEQA Guidelines Section 15183(a) similarly exempts projects from environmental review that are consistent with the development density established by existing zoning, community plan, or general plan policies for which an EIR was certified to streamline the review of such projects and reduce the need to prepare repetitive environmental studies. Under these circumstances, CEQA permits a lead agency to limit its examination of environmental effects to those that the agency determines:

    - Are peculiar to the individual project or the parcel on which the project would be located;
    - Were not analyzed as significant effects in a prior EIR on the zoning action, general plan, or community plan with which the project is consistent;
    - Are potentially significant off-site impacts and cumulative impacts which were not discussed in the prior EIR prepared for the general plan, community plan or zoning action; or
    - Are previously identified significant effects which, as a result of substantial new information which was not known at the time the EIR was certified, are determined to have a more severe adverse impact than discussed in the prior EIR (CEQA Guidelines Section 15183(b)).

  Thus, CEQA Guidelines Section 15183.3(a) provides for streamlined environmental review of certain infill projects where the effects of such infill projects have been previously addressed and analyzed in a prior EIR for a planning-level decision or by uniformly applicable development policies.

1.6 DEFINITIONS OF KEY CEQA TERMINOLOGY

Feasible: "Capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors" (CEQA Section 21061.1).

Project Impacts

Less than Significant Impact: A physical environmental effect that would (1) result directly or indirectly from the proposed project and (2) not exceed any identified significance threshold based on the methodology specified for the impact being analyzed.

Less than Significant with Mitigation Incorporated: A significant adverse impact that would result directly or indirectly from the proposed project for which implementation of proposed mitigation measures would avoid or reduce the physical environmental effect so as to be less than significant with the implementation of such mitigation measures. However, if proposed mitigation measures are not adopted, impacts would remain significant and unavoidable.

Mitigation Measure: A proposed condition of approval that addresses a significant environmental impact by either (1) avoiding the impact; (2) reducing or minimizing the magnitude, scope, or intensity of the impact; or (3) compensating for the impact by replacing or substituting for the (natural) resource or ecological functions that would be impaired, suspended, or eliminated.

Significance Criteria, Significance Thresholds: Identifiable quantitative, qualitative, or performance level criteria for specific environmental effects, noncompliance with which means the effect will normally be determined to be significant and compliance with which means the effect normally will be determined to be less than significant.

Significant Environmental Effect, Significant Impact: A physical environmental effect that would (1) result directly or indirectly from the 2025 Specific Plan project, and (2) exceeds any identified significance threshold based on the methodology specified for the impact being analyzed. A significant environmental effect or impact includes any substantial adverse change in physical environmental conditions, such as land, air, water, minerals, flora, fauna, ambient noise, and objects of historic and aesthetic significance (CEQA Guidelines Section 15382). An economic or social change by itself is not typically considered to be a significant impact, even if the change would be substantial. However, social or economic changes related to a physical environmental change may be considered in determining whether the physical change is significant (CEQA Guidelines Section 15382).

Significant and Unavoidable Impact: A significant adverse environmental impact that would result directly or indirectly from the 2025 Specific Plan project and for which either no

mitigation is feasible, or the physical environmental effect would still remain significant even after implementation of all feasible mitigation measures.

Cumulative Impacts

Cumulative Impact: The cumulative impact from two or more projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time (CEQA Guidelines Section 15355).

Cumulatively Considerable Impact: A cumulatively considerable impact would result when the 2025 Specific Plan project would make a substantial contribution to a significant cumulative impact.

Less than Cumulatively Considerable Impact: A less than cumulatively considerable impact would result when the contribution of the 2025 Specific Plan project to a significant cumulative impact on the environment would not be substantial.

1.7 ACRONYMS USED IN THIS DOCUMENT

AASHTO	American Association of State Highway and Transportation Officials
AB	Assembly Bill
ABAG	Association of Bay Area Governments
ACE	Advanced Clean Equipment
ACRES	Assessment, Cleanup, and Redevelopment Exchange System
ACS	American Community Survey
ACT	Advanced Clean Trucks
ADC	alternative daily cover
ADA	Americans with Disabilities Act
ADOE	Archaeological Determinations of Eligibility
ADT	average daily traffic
AF	acre-feet
AFY	acre-feet per year
AGF	active ground floor
ALUC	Airport Land Use Commission
ALUCP	airport land use compatibility plan
AMSL	above mean sea level
ANSI	American National Standards Institute

AQMP	air quality management plan
ASCE	American Society of Civil Engineers
ASHRAE	American Society of Heating, Refrigerating, and Air-Conditioning Engineers
AST	above-ground storage tanks
AWWA	American Water Works Association
BAAQMD	Bay Area Air Quality Management District
BACMs	best available control measures
BACT	best available control technology
BART	Bay Area Rapid Transit
BAWSCA	Bay Area Water Supply and Conservation Agency
BBCAG	Brisbane Baylands Community Advisory Group
BCDC	Bay Conservation and Development Commission
BDI	Baylands Development Inc.
BMP	best management practice
BOD	biochemical oxygen demand
BP	before present
BRT	bus-rapid transit
BSD	Bayshore Sanitary District
Btu	British thermal unit
CAAQS	California Ambient Air Quality Standards
CAFÉ	Corporate Average Fuel Economy
CalARP	California Accidental Release Prevention
CalEMA	California Emergency Management Agency
CalEPA	California Environmental Protection Agency
CAL FIRE	California Department of Forestry and Fire Protection
CALGreen	California Green Building Standards Code
Cal OES	California Governor's Office of Emergency Services
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CAO	Cleanup and Abatement Order
CAP	climate action plan
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CARE	Chico Advocates for a Responsible Economy

CASQA	California Stormwater Quality Association
CBC	California Building Code
CCA	Community Choice Aggregation
C/CAG	City/County Association of Governments of San Mateo County
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERCLIS	Comprehensive Environmental Response, Compensation and Liability Information System
CERS	California Environmental Reporting System
CERS HAZ	California Environmental Reporting System Hazards Waste Sites
CESA	California Endangered Species Act
CFD	computational fluid dynamics
CFDW	California Department of Fish and Wildlife
CFR	Code of Federal Regulations
CGDP	California Goldfields – Dwarf Plantain Flower Fields
CH_4	Methane
CHMIRS	California Hazardous Material Incident Report System
CHP	California Highway Patrol
CHRIS	California Historic Resources Information System
CHSRA	California High Speed Rail Authority
CIP	Capital Improvement Program
City	City of Brisbane
CIWMP	San Mateo County Countywide Integrated Waste Management Plan
CMP	Congestion Management Program
CNDDB	California Natural Diversity Database
CNEL	community noise equivalent level
CNPS	California Native Plant Society
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
COC	contaminant of concern
COPC	chemical of potential concern

CORE	CARB's Clean Off-Road Equipment Voucher Incentive Project
CPP	Community Proposed Plan
CPP-V	Community Proposed Plan – Recology Expansion Variant
CPSRA	Candlestick Point State Recreation Area
CPUC, PUC	California Public Utilities Commission
CREBL	(Brisbane) Committee for Renewable Energy in the Baylands
CRHR	California Register of Historical Resources
CRPR	California Rare Plant Ranking
CSD	Community Services District
CUPA	Certified Unified Program Agency
CVC	California Vehicle Code
CVC	California Vehicle Code
CVOCs	chlorinated volatile organic compounds
dB	decibel
dBA	A-weighted decibel
DDT	dichlorodiphenyltrichloroethane
DELISTED TNK	Delisted Storage Tank
DELISTED CTNK	Delisted CERS Tanks
DELISTED HAZ	Delisted CERS Hazardous Waste Sites
DHS	California Department of Health Services
d.u., du	dwelling unit
du/ac	dwelling units per acre
DNL, Ldn	day-night noise level
DOF	California Department of Finance
DPM	Diesel particulate matter
DSP	Developer-Sponsored Plan
DSP-V	Developer-Sponsored Plan – Entertainment Variant
DTSC	Department of Toxic Substances Control
DWR	California Department of Water Resources
ECOS	Environmental Conservation Online System
EIR	environmental impact report
EIS	environmental impact statement
EMF	electromagnetic field
EO	Executive Order

EOC	Emergency Operations Center
EOP	(Brisbane) Emergency Operations Plan
EPA/USEPA	United States Environmental Protection Agency
ERIS	Environmental Risk Information Services
ERNS	Emergency Response Notification System
ESA	Environmental Science Associates
ESL	environmental screening level
EV	electric vehicle
FAR	floor area ratio
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
FICON	Federal Interagency Committee on Noise
FIRM	Flood Insurance Rate Maps
FS/RAP	feasibility study/remedial action plan
FTA	Federal Transit Administration
gal	gallons
GHG	greenhouse gas
GIS	Geographic Information Systems
gpm	gallons per minute
GWP	global warming potential
HAZGEN	Generators from Hazardous Waste Manifest Data
HAZNET	Handlers from Hazardous Waste Manifest Data
HAZ TSD	Hazardous Waste Manifest Data
HCD	California Department of Housing and Community Development
HFC	hydrofluorocarbon
HHRA	human health risk assessment
HIST CHMRS	Historical CHMRS
HIST CORTESE	Historical Cortese List
HIST TNK	Historical Hazardous Substance Storage Container Information-Facility Summary
HRA	Health Risk Assessment
HUD	United States Department of Housing and Urban Development
HVAC	heating, ventilation, and air conditioning
in/sec	inches per second

IPCC	Intergovernmental Panel on Climate Change
ISO	Insurance Service Office
JPA	Joint Powers Authority
JUHSD	Jefferson Union High School District
LAFCo	Local Agency Formation Commission
LEA	local enforcement agency
LED	light emitting diode
LFG	landfill gas
LMF	light maintenance facility for the California High-Speed Rail system
LOS	level of service
LUST	leaking underground storage tank
MEIR	maximally exposed individual residences
mgd	million gallons per day
MMBtu	million British thermal units
MMRP	mitigation monitoring and reporting program
MMT	million metric tons
$MMTCO_2e$	million metric tons of carbon dioxide equivalent
MOA	memorandum of agreement
MOU	memorandum of understanding
MPOA	Master Property Owners' Association
MRZ	Mineral Resource Zone
MS4	municipal separate storm sewer system
MT	metric ton
MTC	Metropolitan Transportation Commission
$MTCO_2e$	metric tons of carbon dioxide equivalent
Muni	San Francisco Municipal Railway
MW	megawatt
MWh	megawatt-hour
N_2O	nitrous oxide
ND	LEED for Neighborhood Development
NAHC	Native American Heritage Commission
NCFA	North County Fire Authority
NEPA	National Environmental Policy Act
NFPA	National Fire Protection Association

NFRAP	No Further Remedial Action Planned
NHTSA	National Highway Traffic and Safety Administration
NMFS	National Marine Fisheries Service
NO_2	nitrogen dioxide
NOAA	National Oceanic and Atmospheric Administration
NOD	Notice of Determination
NOP	Notice of Preparation
NO_X	nitrogen oxides
NPDES	National Pollution Discharge Elimination System
OLUCI	California Governor's Office of Land Use and Climate Innovation (formerly Governor's Office of Planning and Research [OPR])
OSEC	Brisbane Open Space and Ecology Committee
OSHA	Occupational Safety and Health Administration
OU-SM	Operable Unit-SM
PAH	polynuclear aromatic hydrocarbon
Pb	lead
PCB	polychlorinated biphenyl
PCE	Peninsula Clean Energy
PDA	Priority Development Area
PFC	perfluorocarbon
PG&E	Pacific Gas and Electric Company
PK	pre-kindergarten
$PM_{2.5}$	fine particulate matter (less than 2.5 micrometers in diameter)
PM_{10}	particulate matter (less than 10 micrometers in diameter)
ppm	parts per million
PPV	peak particle velocity
PRC	Public Resources Code
PSR	(Candlestick Interchange) Project Study Report
R&D	research and development uses
RCRA	Resource Conservation and Recovery Act
RDIP	Remedial Design and Implementation Plan
RHNA	Regional Housing Needs Allocation
ROG	reactive organic gas
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board

SamTrans	San Mateo County Transit District
SB	Senate Bill
SCS	Sustainable Communities Strategy
s.f., sf	square feet
SF_6	sulfur hexafluoride
SFO	San Francisco International Airport
SFPUC	San Francisco Public Utilities Commission
SHPO	State Office of Historic Preservation
SIP	State Implementation Plan
SMARA	California Surface Mining and Reclamation Act of 1975
SMCTA	San Mateo County Transportation Authority
SO_2	sulfur dioxide
SO_3	sulfur trioxide
SO_4	sulfate
SVOC	semi-volatile organic compound
SWPPP	stormwater pollution prevention plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TDM	Transportation Demand Management
TK	transitional kindergarten
TMDL	total maximum daily load
TOG	total organic gas
TPA	Transportation Priority Area
TPH	total petroleum hydrocarbon
TPH-g	gasoline-range hydrocarbons
TPH-d	diesel-range hydrocarbons
TPH-mo	motor oil range hydrocarbons
TRB	Transportation Research Board
TRU	transportation refrigeration unit
TSM	transportation system management plan
TSS	total suspended solid
USDA	United States Department of Agriculture
USDOT	United States Department of Transportation
USFS	United States Forest Service

USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UST	underground storage tank
UV	ultraviolet
VMT	vehicle miles traveled
VOC	volatile organic compound
WBWG	**Western Bat Working Group**
WDR	waste discharge requirement
WETA	**Water Emergency Transportation Authority**
WRF	water recycling facility
WSA	water supply assessment
yr	year
ZE	zero-emission
ZEV	zero-emission vehicle
ZNE	zero net energy

1.8 REFERENCES

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CHAPTER 2 GENERAL ENVIRONMENTAL AND PLANNING CONTEXT

This chapter describes the local, regional, state, and federal environmental and planning context within which the 2025 Baylands Specific Plan and related project components would be developed, including the planning review and environmental documentation that was previously undertaken by the City of Brisbane for the Baylands. It also describes the Baylands' physical setting and history, as well as the current General Plan and zoning, land uses, and infrastructure. Additional resource-specific details regarding environmental setting are provided in the individual resource sections of Chapter 4.

2.1 PROJECT LOCATION

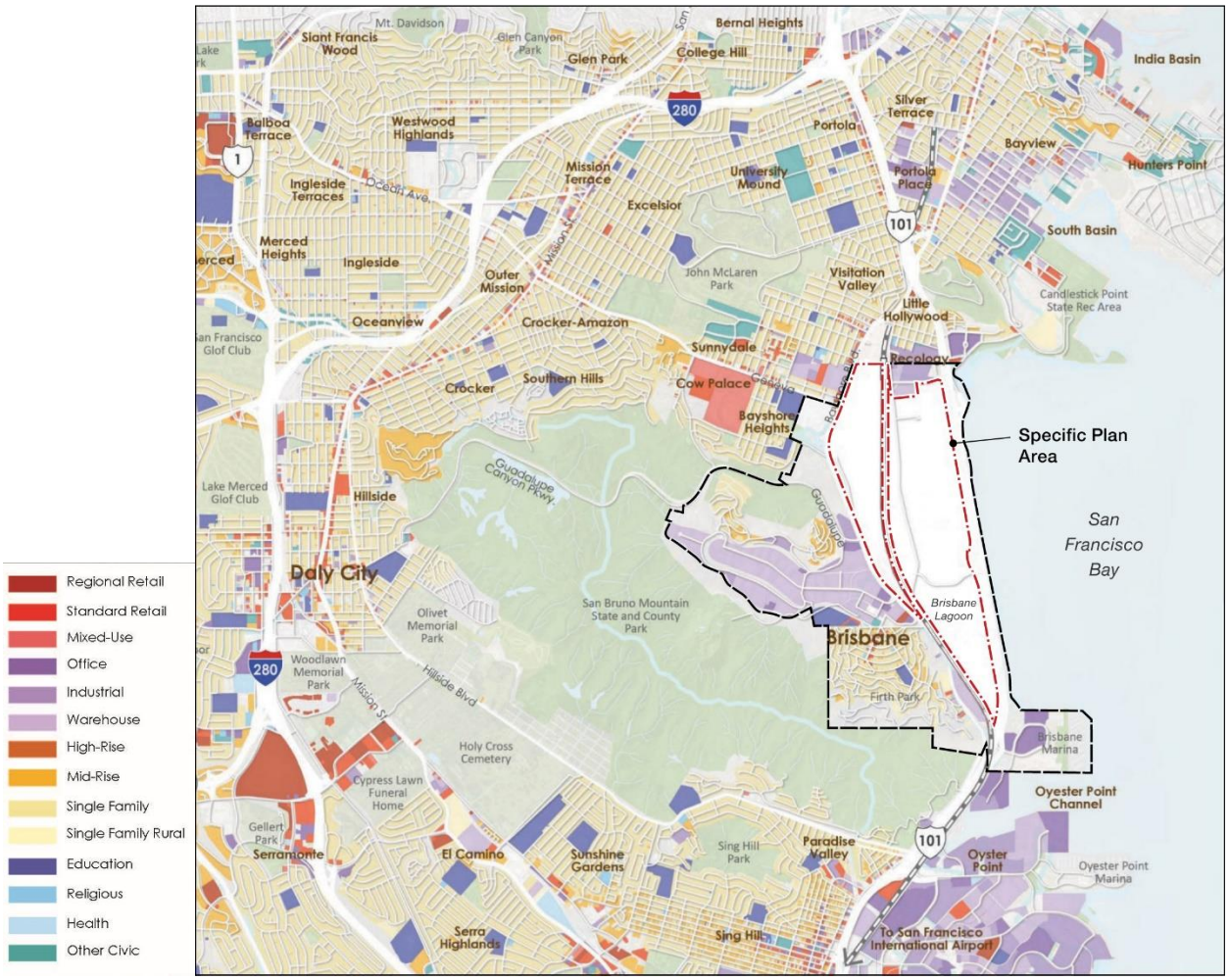
The City of Brisbane and the Baylands Specific Plan area lie within the nine-county San Francisco Bay Area region in the northeastern corner of San Mateo County, immediately south of the City and County of San Francisco (see **Figure 2-1**). Collectively, San Francisco and San Mateo counties are sometimes referred to as the "Peninsula."

Figure 2-1: Regional Location

SOURCE: Metis Environmental Group, 2024

Brisbane is nestled between the City and County of San Francisco (Visitacion Valley and Little Hollywood neighborhoods) to the north; San Bruno Mountain, the City of Daly City, an unincorporated portion of San Mateo County to the west; and the City of South San Francisco to the south. San Francisco Bay, which lies approximately 250 feet east of the Baylands, forms Brisbane's eastern boundary. As viewed from US Highway 101 (US 101) and flights leaving San Francisco International Airport, the Brisbane community lies within a low-density "cove" formed by the ridges extending from San Bruno Mountain that separate the community from highly urbanized areas to the north and south. The combination of these ridges, the Brisbane Lagoon, and industrial uses and utility facilities in the northern portion of the City physically separate Brisbane from the adjacent urban communities of San Francisco, Daly City, and South San Francisco, as illustrated in **Figure 2-2**, which also illustrates the large size of the Specific Plan area in relation to the developed portions of Brisbane west of Bayshore Boulevard.

Figure 2-2: Generalized Land Use Context, 2022



San Bruno Mountain, whose slopes form the western edge of Brisbane, provides a dramatic visual backdrop to the City when viewed from the north and east. Views of Candlestick Point and the Bay to the east are available from the developed east-facing slopes of San Bruno Mountain.

The City of Brisbane (2024 population = 4,661) maintains a small-town suburban character despite its location adjacent to the highly urbanized cities of San Francisco (2024 population = 843,071), Daly City (2024 population = 101,458), and South Francisco (2024 population = 64,601) (DOF 2024). Both San Francisco and South San Francisco are major employment centers, employing an estimated 785,530 and 46,635 people, respectively, in 2020. Brisbane is situated along the urbanized US 101 freeway corridor between San Francisco immediately to the north and the "Silicon Valley" area with its estimated 1.6 million jobs in San Mateo and adjoining Santa Clara counties approximately 25 miles to the south of Brisbane. Development of the 2,200 dwelling units, along with up to 6.5 million sf of commercial office development and an additional 500,000 sf of hotel use permitted by the Specific Plan would increase Brisbane's 2024 population of 4,661 by approximately 4,905 residents and increase the City's estimated 2022 employment base of 13,000 by up to 19,480 jobs.

2.2 DESCRIPTION OF THE BAYLANDS SITE

2.2.1 LOCATION

The Baylands Specific Plan area, which includes the Baylands subarea of the Brisbane General Plan[33] and the Brisbane Lagoon, encompasses approximately 680.1 acres (532.3 acres of existing land area[34] and 121.8 acres of lagoon) located approximately 250 feet west of San Francisco Bay (see **Figure 3-2**). The site is bounded to the east by US 101, to the west and south by Bayshore Boulevard, and by the City and County of San Francisco to the north.

2.2.2 PHYSICAL SETTING

The Specific Plan area is bisected in a north–south direction by the Caltrain railroad right-of-way and in an east–west direction by Visitacion Creek. The majority of the Specific Plan area is flat or gently sloping toward San Francisco Bay, with an elevation range of 10 to 50 feet above mean sea level. The most prominent natural feature within the Baylands is Icehouse Hill, located in the southwestern portion of the site, which ranges from 25 to 200 feet above mean sea level. There are steep cuts on the east side of Icehouse Hill along the west side of the Caltrain

[33] A portion of the Specific Plan area is currently within the Beatty Subarea. As part of the 2025 Specific Plan project, a General Plan amendment is proposed to place the entirety of the Specific Plan area within the Baylands Subarea.

[34] Approximately 26 acres of the Baylands Specific Plan's existing 558.3-acre land area is subject to sea level rise through the Year 2100. Thus, Specific Plan land use development statistics are based on 532.3 acres of land area (558.3 acres of existing land area – 26 acres subject to approximately 83 inches of sea level rise through 2100 = 532.3 net acres of land for development purposes).

railroad line and more gently sloping cuts along Bayshore Boulevard on the west side of the hill. The most prominent manmade feature within the Baylands is the former Brisbane landfill in the eastern portion of the site. The former landfill appears as two rectangular plateaus, bounded by manufactured slopes with Visitacion Creek running between them.

Major regional transportation facilities connecting the Baylands and Brisbane to the Bay Area region and beyond include the US 101 freeway via the "Candlestick" and Sierra Point Parkway interchanges adjacent to and within the Baylands, respectively. Caltrain, a major commuter line connecting San Francisco with communities in the Peninsula region and San Jose, has tracks that bisect the Baylands, with its Bayshore station located at the northern end of the site. Local transit services are available through the SamTrans and San Francisco Muni systems along Bayshore Boulevard immediately to the west of the Baylands.

2.2.3 HISTORY OF THE BAYLANDS

The earliest recorded non-indigenous land use in what is now Brisbane was ranching. The Guadalupe Valley, within which Central Brisbane, Crocker Park, and the Northeast Ridge are located, was part of an 1838 Mexican land grant known as *Rancho Cañada de Guadalupe la Visitacion y Rodeo Viejo*. Charles Crocker purchased most of this land grant in 1884 and called it Visitacion Ranch.

a. Filling of San Francisco Bay to Create the Baylands

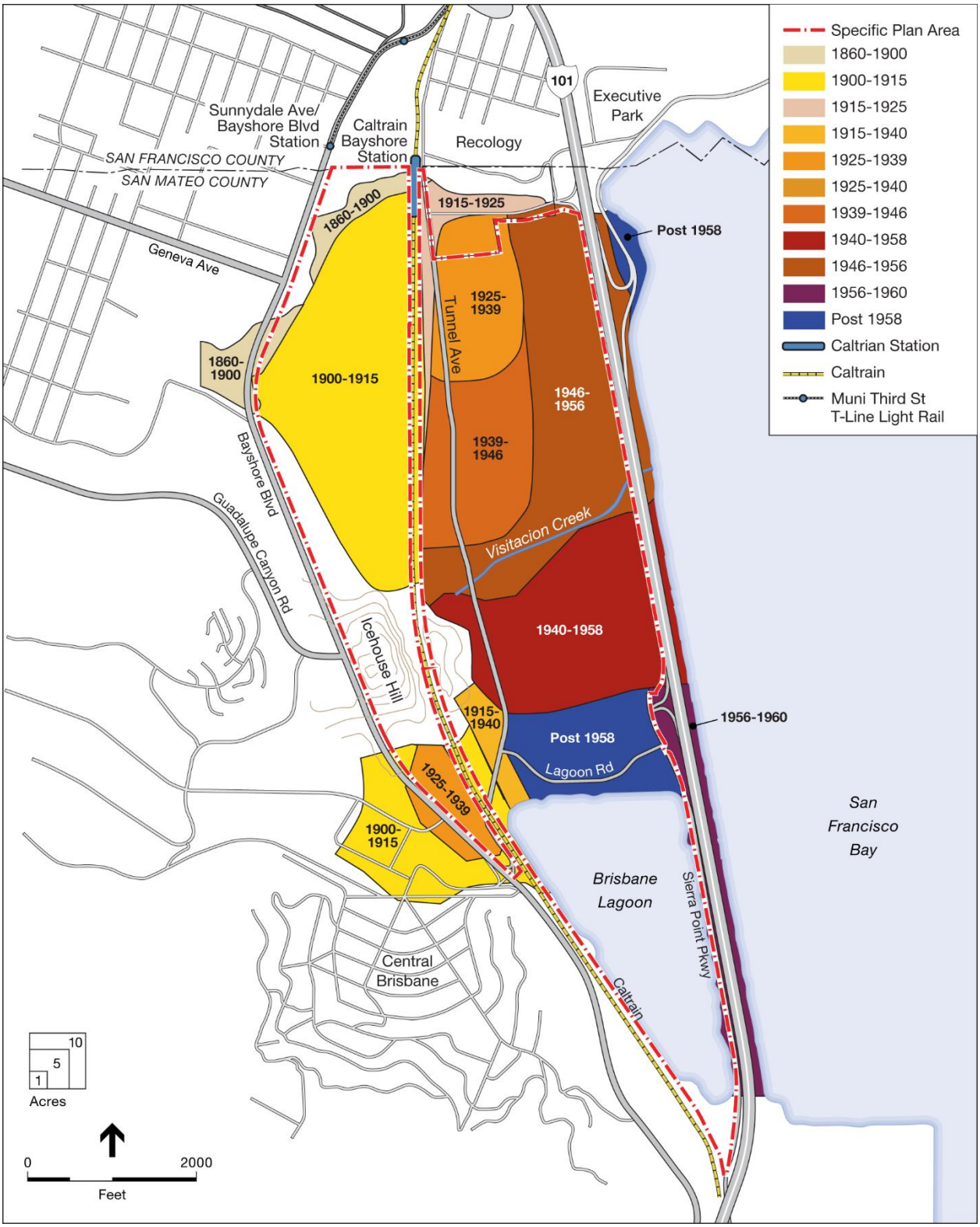
As shown in **Figure 2-3**, the majority of the Baylands was historically part of San Francisco Bay. Filling of the Bay to create the Baylands started in the 1860s with construction of a rail line from San Francisco to San Jose. After the 1906 San Francisco earthquake, the area west of the rail corridor was filled in primarily with rubble generated by demolition of damaged San Francisco structures.

By 1915, the area west of the rail line had been filled and was no longer part of the Bay. Filling of the Bay to create the Brisbane Landfill progressed from north to south starting about 1915, with fill operations completed in the early 1960s.

b. Historic Uses of the Baylands

The primary historic uses of the Baylands include the former Southern Pacific Bayshore Railyard west of the Caltrain right-of-way and the former Brisbane Landfill east of the rail line.

Figure 2-3: Historic Filling of San Francisco Bay to Create the Baylands



Southern Pacific Railroad Maintenance Yard

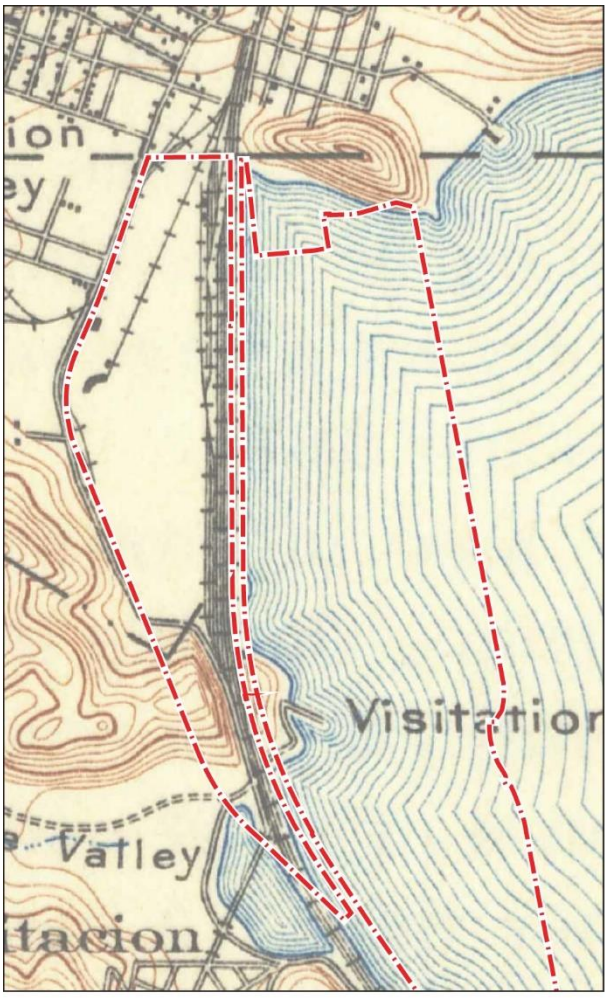
The San Francisco & San Jose Railroad (SF&SJRR) Company completed the rail line connecting the two cities in 1864 and was consolidated into the Southern Pacific Railroad (SPRR) system in 1870. At the turn of the 20th century, SPRR initiated extensive improvements to the rail line, including construction of the "Bayshore Cutoff," a new level route that more closely followed the San Francisco Bay shoreline at the time.

As part of the Bayshore Cutoff project, a modern freight terminal designed to replace the old machine shops and car repair and roundhouse facilities in San Francisco was constructed on approximately 200 acres of fill at Visitacion Bay within what is now the western portion of the Baylands site. The new "Bayshore Yard," approximately 8,400 feet long, included a roundhouse, machine and car shops, and a hump.[35] The Roundhouse at the Bayshore Yard was built circa 1907 to service freight locomotives and is now listed on the National Register of Historic Places. The former Tank and Boiler Shop at the Bayshore Yard was built in 1920 to maintain and repair the iron boilers on the steam locomotives.

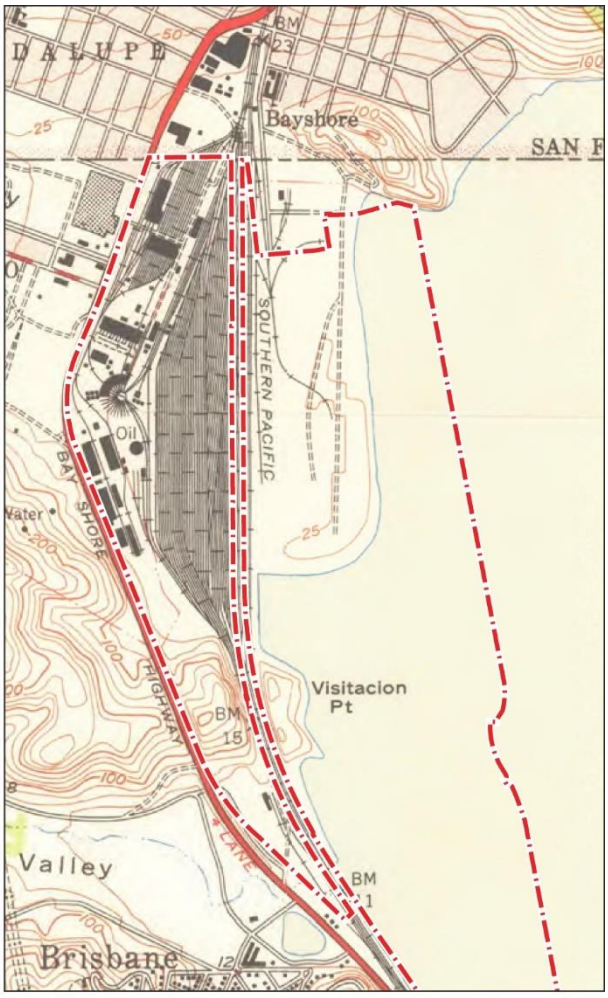
Use of the freight yard ceased in the 1960s and the yard was predominantly idle at the time of its purchase in the late 1980s by Tuntex, now Sunquest Properties, Inc., the current owner of the site. Caltrain took over the Union Pacific rail line in the 1980s, and by 1989 nearly all of the railroad spur tracks, numerous maintenance shops, and smaller support structures had been removed from the Baylands. **Figure 2-4** shows changes in the former railyard site over time.

[35] A railroad "hump" is an artificially built hill that uses the force of gravity to propel the cars through the various switches in order to arrange them into various trains without having to use switch engines to guide the cars into place. The hump at Bayshore is no longer extant.

Figure 2-4a: Former Brisbane Rail Yard over Time (1915–1950)



1915
The railroad through this site officially opened for service on December 8, 1907.

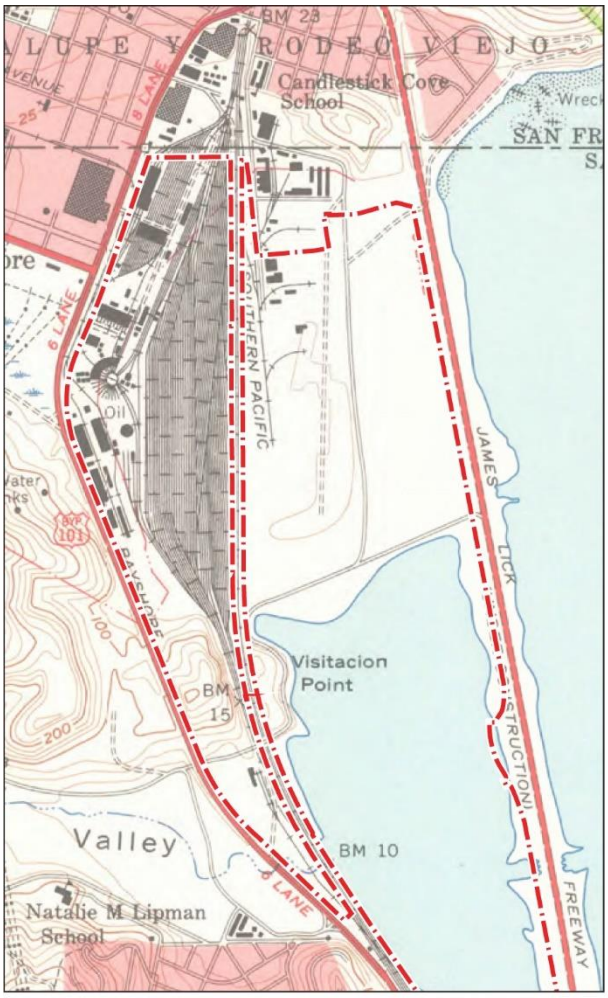


1950
Peak of railroad operations. By 1950, approximately 75 railroad maintenance shops and smaller structures had been constructed along the western edge of the railroad yard and clustered along Bayshore Boulevard.

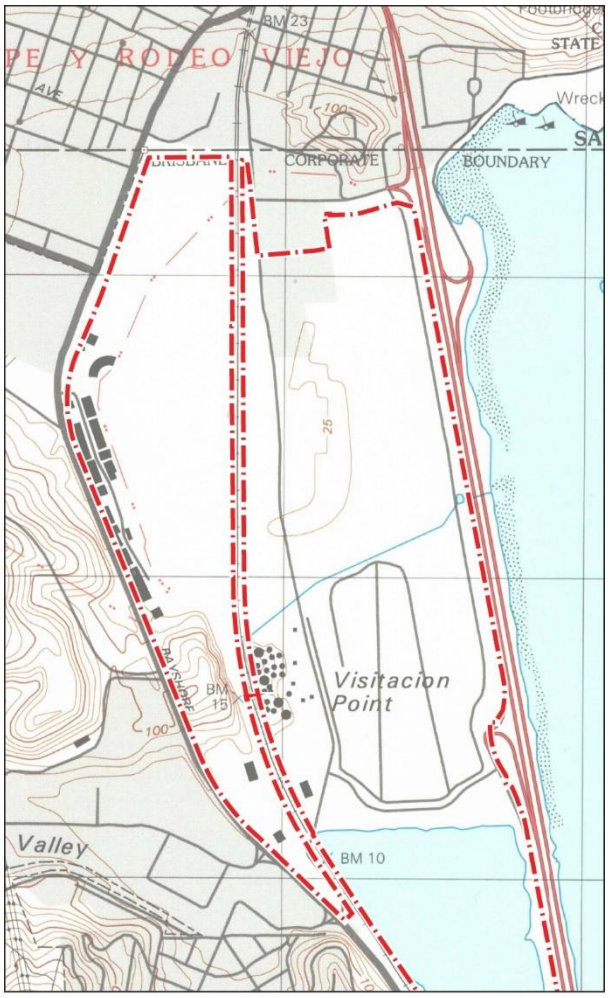
Figure 2-4b: Specific Plan Area as Viewed Looking North from Icehouse Hill, 1905

The in-progress railroad line through the middle of the photo is the Bayshore Cutoff that would become the eastern edge of the SPRR Bayshore yard through what is now the Baylands. The area east of the rail line would be filled with solid waste starting in the 1930s, creating the "Brisbane Landfill." The hill in the back right is Candlestick Point. (OpenSFHistory.org 2023)

Figure 2-4c: Former Brisbane Rail Yard over Time (1956–1995)



1956
The construction of U.S. Highway 101 (U.S. 101) in the mid-1950s established the easternmost boundary of the Bay fill.

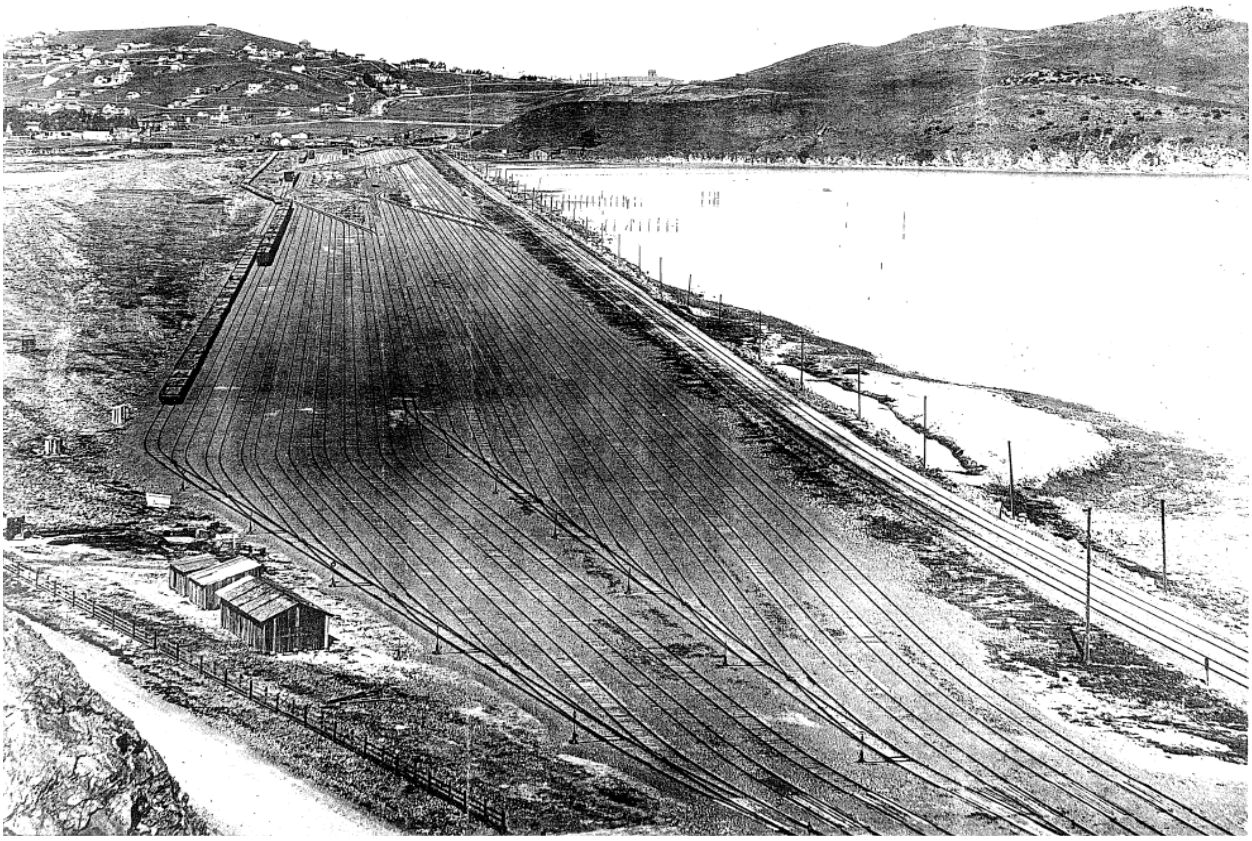


1995
Use of the freight yard ceased in the 1960s, and by 1989 nearly all of the railroad spur tracks and numerous other maintenance shops and smaller support structures had been removed. This 1995 map shows present day conditions and full extent of site fill.

Brisbane Landfill

The area east of the rail corridor was used as a municipal landfill by San Francisco beginning in the 1930s. Starting from the north, dumping continued southward until it was finally stopped in the 1960s at the edge of what is now Brisbane Lagoon. The construction of US 101 in the mid-1950s established the easternmost boundary of the landfill. The former Brisbane Landfill site encompasses an area of approximately 364 acres and is bounded by the Union Pacific/Joint Powers Board railroad corridor (Caltrain tracks) to the west, US 101 to the east, and Brisbane Lagoon to the south. After landfill operations ceased in 1967, the area was buried with a 20- to 30-foot cover of soil and has been used since the 1980s until recently for soil and construction material recycling.

Figure 2-4d: View of Bayshore Railroad Yard from Bayshore Point, February 24, 1911



SOURCE: Collection of Ralph Domenici, sanfranciscotrains.org

The former Champion Speedway, a ⅛-mile oval racetrack, operated on the former landfill from approximately 1963 to 1979 (Justice, no date). The speedway held a number of events during this period, including automobile races and demolition derbies. After closure, the speedway was demolished and covered by fill.

Industrial and Commercial Uses

Simultaneous with landfill operations, various industrial and commercial businesses were established within the Baylands. The Gamerston & Green Lumber Company, Mars Metal Company, and Jones Hardwood Plywood Company are referenced on the 1946 Southern Pacific station plan of the Bayshore freight yard. Two large lumber yards—Van Arsdale Lumber, later Van Arsdale-Harris Lumber Company and Sierra Point Lumber and Plywood Company—appear to have been constructed in the early and late 1960s, respectively. Sierra Point Lumber continues to operate within the Baylands. The Bayshore Industrial Park consists of a series of buildings used for various industrial and service commercial purposes, such as warehousing/storage and auto repair.

2.2.4 EXISTING USES WITHIN THE BAYLANDS

Although the Specific Plan area may appear to be largely vacant at the present time, a large-scale Southern Pacific Railroad maintenance yard and a landfill were previously constructed and operated for decades within the western and eastern portions of the Baylands, respectively. Several remnants from the Southern Pacific Railroad maintenance yard and other uses remain within the Baylands, including small-scale industrial businesses along Industrial Way and Bayshore Boulevard in the northwestern portion of the Baylands; the Machinery & Equipment building associated with former railyard uses; some Recology facilities, the Golden State Lumber, Kinder Morgan Tank Farm, and interim and temporary uses along Tunnel Avenue; North County Fire Authority (Brisbane) Fire Station No. 81; utility facilities; and the Caltrain Bayshore Station. The remains of the historic Roundhouse, associated with the former rail maintenance yard, are proposed to be restored for adaptive reuse as part of the Specific Plan. Other uses include the Mission Blue Nursery, which is proposed to be moved to Icehouse Hill, and a horse boarding stable on the north slope of Icehouse Hill. Municipal waste deposited between 1932 and 1967 in the former Brisbane Landfill east of the Caltrain right-of-way on the Baylands site also remains. Existing uses within the Specific Plan area that are anticipated to continue at their current location and level of operations include:

- Kinder Morgan Energy Tank Farm
- Machinery & Equipment, Inc., equipment manufacturing and distribution
- Bayshore Sanitary District pump station
- Golden State Lumber
- Recology facilities along Tunnel Avenue
- Caltrain Bayshore Station

a. Remaining Railyard Buildings: Roundhouse and the Machinery & Equipment Building

Buildings associated with the former SPRR railyard uses that remain within the Baylands include the Roundhouse and the Machinery & Equipment.[36] Constructed circa 1907, the Roundhouse remains a classic example of a railroad roundhouse, despite being severely damaged by fire in recent years. Fire damage occurred primarily in the western half of the Roundhouse, with portions of its roof now missing, charred timbers, and missing or broken window frames. This abandoned building also shows evidence of vandalism and graffiti, despite the chain-link fencing that encircles the building.

The Visitacion Ice Manufacturing Plant, located at the southern end of the railroad yard, was constructed in 1924 as a Pacific Fruit Express Ice Manufacturing Plant to supply ice to the trains

[36] The Lazzari Fuel building, which served a tank and boiler shop for the SPRR rail maintenance yard and was documented as historic in the Program EIR, was destroyed by fire in March 2024.

of the Pacific Fruit Exchange going in and out of San Francisco. Use of the building as an ice plant was discontinued in 1955. It currently houses Machinery & Equipment, Inc.

b. Brisbane Bayshore Industrial Park

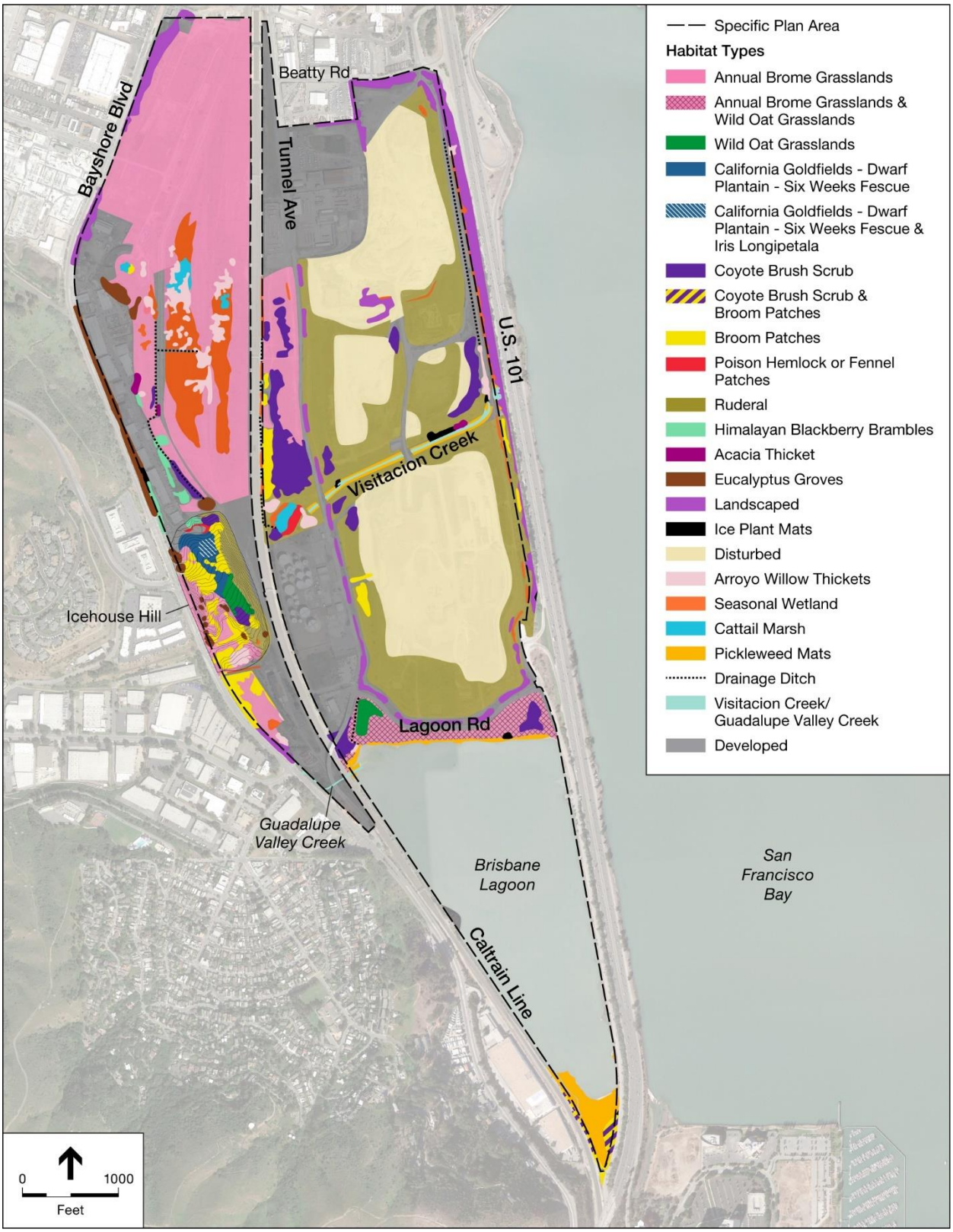
The Brisbane Bayshore Industrial Park is a multi-tenant industrial/warehouse complex with approximately 231,400 sf of building area along Industrial Way in the northwestern portion of the Baylands. Existing businesses range from automotive repairs, engineers, and landscapers to product distributors.

c. Lagoon and Other Natural Resources

The open water/estuarine communities of the Brisbane Lagoon are located at the southern end of the Specific Plan area (see **Figure 2-5**). The lagoon currently encompasses approximately 121.8 acres of open water subject to muted tidal influence from San Francisco Bay via two large (12′ high x 12′ deep), 300-foot long concrete box culverts under US 101, which otherwise separates the lagoon from the Bay. The lagoon's shorelines contain little beach area during high tides and most of the shoreline that is exposed during low tides is protected by riprap. Small areas of mudflats are present along portions of the Bay shoreline and within the lagoon at low tide. Drainages within the Baylands include Guadalupe Valley Creek and manmade Visitacion Creek, while open water occurs within the Brisbane Lagoon. These drainages and open water habitat, including wetlands and marsh habitats, are remnants of extensive wetland and tidal lands that once fringed San Francisco Bay in the Brisbane area.

Vegetation and wildlife habitat have been, and continue to be, highly disturbed within the majority of the Baylands, which is dominated by non-native ruderal and grassland species, with landscaped areas containing non-native trees and shrubs also located in several areas. Icehouse Hill is the only remaining native substrate in the Baylands and is consistent with nearby San Bruno Mountain and supports habitats similar to those found in the San Bruno Mountain Habitat Conservation Plan (HCP) area. Native vegetation types, including coastal scrub and perennial grasslands, are confined to relatively small areas on Icehouse Hill, as well as within the tidal and freshwater wetlands along the edges of drainage channels and Brisbane Lagoon, seasonal wetlands along the edges of drainage channels and Brisbane Lagoon, and seasonal wetlands in the western portion of the site.

Figure 2-5: Baylands Terrestrial Habitats



2.2.5 EXISTING INFRASTRUCTURE, PUBLIC SERVICES, AND FACILITIES SERVING THE BAYLANDS

a. Transportation Facilities

Regional vehicle access to the Baylands is provided by the US 101 freeway and the following key arterial and collector streets within Brisbane and the adjacent cities of San Francisco and Daly City.

- **Bayshore Boulevard**, a four-lane arterial street with left turn lanes at major intersections and striped bicycle lanes throughout the City. Bayshore Boulevard forms the western boundary of the Baylands and is the City's primary north–south roadway, connecting Brisbane to San Francisco, Daly City, and South San Francisco. Together with its connecting minor arterial streets, Bayshore Boulevard also provides linkages to and from US 101. As a result, Bayshore Boulevard's performance affects traffic throughout the City.

  Bayshore Boulevard functions primarily as a regional roadway through Brisbane when congestion causes traffic to be diverted onto Bayshore Boulevard through the City of Brisbane. The majority of traffic on Bayshore Boulevard within Brisbane is between San Francisco and cities to the south, with a smaller amount (approximately 15 percent of all trips) traveling between Daly City and the cities to the south. Depending on the time of day and location, regional through traffic makes up 60 to 80 percent of traffic on Bayshore Boulevard. On a daily basis, only 10 to 15 percent of all trips on Bayshore Boulevard are generated from Brisbane's residential neighborhoods and 15 to 20 percent are generated by Brisbane's employment centers.

- **Geneva Avenue**, a four-lane east–west arterial street running between I-280 (adjacent to the Balboa Park Bay Area Rapid Transit (BART) Station and the City College of San Francisco Phelan Campus) and Bayshore Boulevard, where it currently terminates adjacent to the Baylands. As part of Baylands development, Geneva Avenue will be constructed through the Baylands to provide an important connection to US 101 for traffic generated within both Brisbane and Daly City. Improvements are proposed to replace the current US 101 on- and off-ramps at Alana Way and Harney Way with a new, more efficient configuration at the future Geneva Avenue, known as the "Candlestick Interchange."

- **Guadalupe Canyon Parkway** is a four-lane east–west arterial street near the Baylands that runs from Bayshore Boulevard over the hills to Daly City, where it becomes East Market Street.

- **Valley Drive** is a four-lane east–west collector street between Bayshore Boulevard and West Hill Drive.

- **Sunnydale Avenue** is a two-lane east–west street north of Geneva Avenue that runs between Bayshore Boulevard and Persia Avenue and provides access to the Visitacion Valley neighborhood of San Francisco.
- **Alana Way and Harney Way**, short segments of which are within Brisbane, serve as principal arterials connecting to US 101 from Beatty Avenue in Brisbane and Harney Way at Candlestick Point in San Francisco. Alana Way has a narrow three-lane underpass beneath US 101 with two lanes westbound and one lane eastbound.

Existing roadways that provide internal circulation within the Baylands include the following:

- **Tunnel Avenue** is a two-lane north–south collector street that connects to Bayshore Boulevard (1) to the north in San Francisco and (2) to the south at the Old County Road intersection, forming the entry into Central Brisbane. The Bayshore Caltrain station and a small park-and-ride lot are accessible from Tunnel Avenue.
- **Beatty Avenue** is a two-lane east–west collector street near the northern edge of the Baylands, providing access between Tunnel Avenue and the US 101 interchange at Alana Way and Harney Way.
- **Lagoon Road** is a two-lane collector street that borders the lagoon in the southern portion of the Baylands and runs east–west from Sierra Point Parkway to Tunnel Avenue.
- **Sierra Point Parkway** is a two-lane collector roadway that runs south from the US 101 southbound interchange at Lagoon Road to the US 101 northbound interchange and into the Sierra Point business park southeast of the Baylands.

b. Existing Water Supply

Water service is currently provided to the Baylands by the City of Brisbane, which operates two separate water districts in an integrated system to provide water to residents and businesses throughout the City. Brisbane does not have its own groundwater or surface water supplies and therefore purchases potable water from the San Francisco Public Utilities Commission (SFPUC), which operates the water system for San Francisco and serves as a wholesale water supplier to agencies in San Mateo, Santa Clara, and Alameda counties.

c. Wastewater

Wastewater collection services are provided by the Bayshore Sanitary District (BSD) for all upland areas of the Baylands north of Brisbane Lagoon, and by the City throughout the rest of Brisbane. Both agencies maintain wastewater collection facilities and contract with the SFPUC for wastewater treatment.

Within the Baylands is a 0.1-acre "Carlyle Pump Station" sewer pump station that was built in 1972 and is operated by the BSD. The majority of the BSD's wastewater flows into this station and is pumped to the SFPUC's southeast treatment plant where it receives secondary treatment. The station has a capacity to pump over 5 million gallons per day. Its current average daily pump flows are 380,000 gallons during dry weather and 1.2 million gallons during wet weather.

Existing wastewater flows from the Baylands are collected and conveyed for treatment at the SFPUC's Southeast Water Pollution Control Plant (SEP) through two connections to the existing SFPUC 78-inch-diameter combined sewer/stormwater transmission main located within Sunnydale Avenue and underneath portions of the Recology facility.

Located in the Bayview District of southeastern San Francisco, the SEP is a 250-million-gallon-per-day (MGD) pure-oxygen-activated sludge-treatment facility that provides secondary treatment and serves municipal and industrial customers on the east side of San Francisco, in Brisbane, and within the BSD. The SEP is part of San Francisco's combined sewer system, which allows the collection and treatment of both wastewater and stormwater. The SEP does not currently have the capability to produce recycled water.

d. Solid Waste Management

The Baylands is served by Recology San Francisco. Other portions of Brisbane are served by South San Francisco Scavenger. Recology provides solid waste collection, recycling, and disposal services for residential and commercial customers in San Francisco and the Baylands through a three-cart collection program that requires, under San Francisco's Mandatory Recycling and Composting Ordinance, customers to sort solid waste into recyclables; compostable items, such as food scraps and yard trimmings; and garbage. Materials are collected and hauled to the 60-acre Recology transfer station at 501 Tunnel Avenue, adjacent to the Specific Plan area's northerly boundary, which houses a transfer facility where landfill-bound refuse and composting facility-bound organics are consolidated prior to transportation. An integrated Material Recovery Facility (iMRF) handles construction and demolition (C&D) materials.

Recyclable materials are sent to Recology's recycling center (Recycle Central) at Pier 96 in San Francisco where they are separated and sold to manufacturers that turn the materials into new products. Recycle Central processes up to 700 tons per day, achieving an estimated 80 percent recovery rate with <2 percent contamination for fiber and other commodities.

Recology's Blossom Valley Organics – North composting facility processes in excess of 320,000 tons of organic materials each year, including food scraps, plant trimmings, and food-soiled fiber products. The 126-acre facility is located in the San Joaquin County community of Vernalis.

Solid waste that is not recycled is hauled to Recology's Hay Road Landfill in Solano County (City and County of San Francisco 2015). The Hay Road Landfill is permitted by Solano County and the California Department of Resources Recycling and Recovery (CalRecycle) to accept up to 3,200 tons per day of municipal solid waste for disposal. The Hay Road Landfill had 27,569,000 cubic yards (75 percent) of its permitted capacity remaining as of 2024 and an estimated remaining site life of 38.0 years.

e. Police Services

The Brisbane Police Department provides security and police services within the Brisbane city limits from its headquarters in City Hall, located less than 0.5 miles west of the Baylands. The Brisbane Police Department is staffed with 16 sworn officers and 4 support staff members. The staff is comprised of one chief, one commander, four patrol sergeants, one corporal, and nine patrol officers. Officers are assigned specialty positions; for example, there is one K9 officer, two traffic officers, and one SWAT officer. Current patrol staffing consists of a single beat with a minimum of one sergeant or shift supervisor and two other officers per shift.

The Brisbane Police Department maintains 13 vehicles, including six patrol cars, two motorcycles, one pick-up truck, three unmarked detective vehicles, two unmarked administration vehicles, and one unmarked Code Enforcement vehicle

f. Fire Protection

Fire protection services within Brisbane and the Baylands are provided by the North County Fire Authority (NCFA). The City of Brisbane has entered into an agreement along with other neighboring communities to form the NCFA, a Joint Powers Authority that provides fire protection, emergency medical, and other hazardous assistance and public services to the communities of Brisbane, Daly City, and Pacifica. The NCFA currently operates nine fire companies (eight engines and one ladder truck) in eight fire stations throughout its 60-square-mile service area. NCFA fire stations include:

- City of Brisbane
    - Fire Station No. 81 at 3445 Bayshore Boulevard (engine company)
- City of Daly City
    - Fire Station No. 91 at 151 Lake Merced Boulevard (engine company)
    - Fire Station No. 92 at 18 Bepler Street (engine company)
    - Fire Station No. 93 at 464 Martin Street (engine company)
    - Fire Station No. 94 at 444 Gellert Boulevard (engine company)
    - Fire Station No. 95 at 191 Edgemont Drive (engine and ladder truck company)

- City of Pacifica
    - Fire Station No. 71 at 616 Edgemar Avenue (engine company)
    - Fire Station No. 72 at 1100 Linda Mar Boulevard (engine company)

There are at least three firefighters, including at least one paramedic, assigned to each engine while the aerial ladder truck is staffed with four personnel. In addition, a minimum of two battalion chiefs and one deputy fire chief are on duty 24/7. Currently, the NCFA maintains 30 personnel on duty daily.

The City of Brisbane and the Baylands are served by NCFA Fire Station No. 81 (Brisbane), which is located at 3445 Bayshore Boulevard at the intersection of Bayshore Boulevard and Valley Drive in Brisbane. The station is staffed 24/7 by one three-person engine company. A total of 13 personnel are assigned to Station No. 81, including one Assistant Fire Marshal, three captains, and nine firefighters.

g. Public Schools

The Bayshore Elementary School District (Bayshore ESD), Brisbane Elementary School District (Brisbane ESD), and Jefferson Union High School District (Jefferson UHSD) provide grades pre-kindergarten (PK)–12 public education to Brisbane residents. The majority of the Baylands is within the Bayshore ESD, with the exception of industrial uses along Industrial Way, which are within the Brisbane ESD. The Baylands lies entirely within the Jefferson UHSD.

The Bayshore ESD serves residents in the eastern portion of Daly City and the majority of the portion of the City of Brisbane east of Bayshore Boulevard. The District currently serves grades PK–8 from the Bayshore School located 0.5 miles west of the Baylands at 155 Oriente Street in Daly City. The Bayshore School, which is designed to accommodate 568 students, had an enrollment of 322 students in 2022–2023, down from its peak of 381 in the 2019–2020 school year.

The Brisbane School District is a transitional kindergarten (TK)–8 school district consisting of two elementary schools and one middle school. The district had a combined enrollment of 454 students in the 2022–2023 school year, down from the peak of 475 students in the 2019-2020 school year. Brisbane Elementary School is located less than 1 mile west of the Baylands at 500 San Bruno Avenue. Panorama Elementary School, located at 25 Bellevue Avenue in Daly City, is less than 2 miles west of the Baylands. Lipman Middle School, located at 1 Solano Street, is also less than 1 mile from the Baylands.

Residents within the Bayshore and Brisbane elementary school districts are also residents of the Jefferson Union High School District, which serves approximately 4,330 students in grades 9–12, as well as adults, in the cities of Brisbane, Pacifica, Daly City, Colma, South San Francisco, San Bruno and a portion of unincorporated San Mateo County. Jefferson UHSD operates four high

schools—Jefferson (Daly City), Westmoor (Daly City), Terra Nova (Pacifica), and Oceana (Pacifica)—in addition to the Thornton continuation high school (Daly City). The two Jefferson UHSD schools closest to the Baylands are Jefferson High School, approximately 3 miles west of the Baylands at 6996 Mission Street in Daly City; and Westmoor High School, approximately 4 miles west of the Baylands at 131 Westmoor Avenue in Daly City.

h. Public Libraries

The existing Brisbane Library opened at its new location at 163 Visitacion Avenue in April 2021. A library card issued at the Brisbane Library entitles patrons to easily accessible and online resources as well as to use the resources and services available at all the libraries in the Peninsula Library System, which is a consortium of 35 public and community college libraries working together to provide innovative and cost-effective service.

2.2.6 BAYLANDS LAND OWNERSHIP

As shown in **Figure 2-6**, the vast majority of the upland portion of the Baylands is owned by Sunquest Properties. In addition to Sunquest Properties, there are several smaller ownerships within the upland portions of the Baylands including Recology, Golden State Lumber, Kinder Morgan, and others. The City of Brisbane owns the 60-foot-wide Lagoon Road right-of-way, which crosses the southern end of the Baylands between the existing Sierra Point Parkway freeway off-ramp and Tunnel Avenue. In addition, the Bayshore Sanitation District holds a 60-foot-wide access ("roadway") easement that follows Tunnel Avenue south of the Golden State Lumber site, veering west before reaching Visitacion Creek; this easement provides access to the BSD's pump station. The Caltrain Joint Powers Board holds a 30-foot-wide right-of-way parallel to and west of Tunnel Avenue. Additionally, a drainage easement follows the existing drainage channel, and a water line easement crosses the Brisbane Baylands and terminates near the Kinder Morgan Energy Tank Farm.

Sunquest Properties also owns 75 of the 121.8 acres of the Brisbane Lagoon. The remaining lagoon acreage is owned by the City of Brisbane and other private owners. The lagoon property is separated from Sunquest Properties' upland holdings by a 600-foot-wide strip of lagoon shoreline owned by the State Lands Commission (see **Figure 2-6**).

Figure 2-6: Existing Baylands Ownership

2.3 EXISTING LAND USE REGULATIONS

2.3.1 BRISBANE GENERAL PLAN

The Brisbane General Plan provides for a transit-oriented variety of residential, employment- and revenue-generating uses; habitat management; recreation; and public and semi-public facilities within the Baylands. The General Plan currently designates the Specific Plan area as Baylands Planned Development (Residential Permitted), Baylands Planned Development (Residential Prohibited), Heavy Commercial, Marsh/Lagoon/Bayfront, and Public Facilities and Parks.

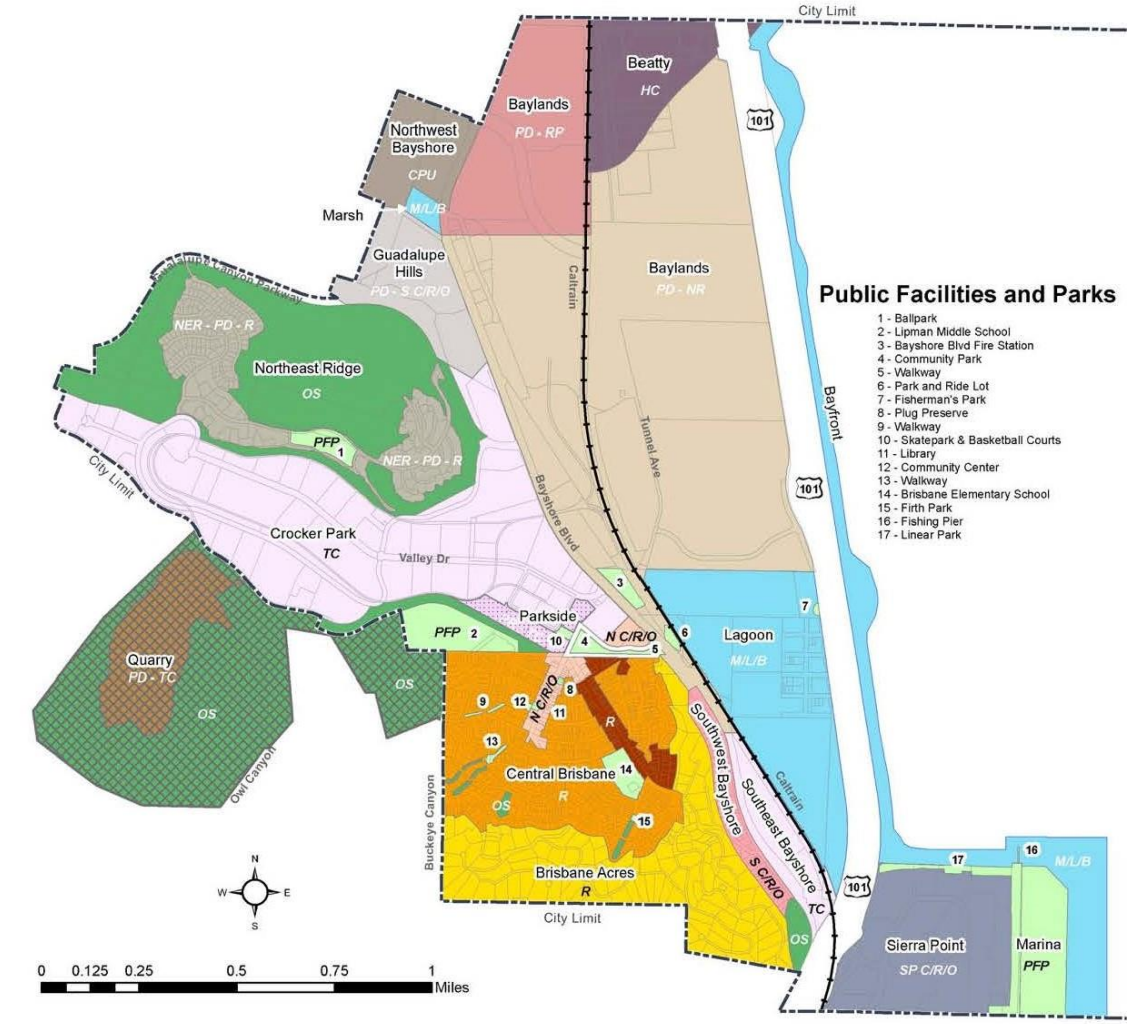
a. General Plan Amendment GP-1-18, Measure JJ

On July 19, 2018, the Brisbane City Council approved General Plan Amendment GP-1-18 permitting development of 1,800 to 2,200 dwelling units (the upper range of which is not to be exceeded when including all units permitted under the state density bonus or other laws providing for affordable housing), up to 6.5 million s.f. of new commercial development, and an additional 500,000 s.f. of hotel development within the Baylands Subarea of the Brisbane General Plan. The General Plan requires non-residential development to be distributed both to the west and east of the Caltrain rail line. Residential uses are permitted only within the northwest quadrant of the site bounded by Bayshore Boulevard on the west, the City and County of San Francisco on the north, the Caltrain rail line on the east, and the line of Main Street (extended) on the south as shown on **Figure 2-7**.

General Plan Amendment GP-1-18, which was submitted to and ratified by the voters via passage of Measure JJ in November 2018, established the following Policy BL.1 for the Baylands:

> Development within the Baylands Subarea shall be subject to the City's approval of a single specific plan for the entirety of the Baylands Subarea and a development agreement that is consistent with General Plan policies, incorporates all applicable EIR mitigation measures, and is consistent with the following standards:
>
> A. The single specific plan and development agreement subject to City review and approval referenced above shall include:
>
> - Detailed plans for Title 27 compliant closure of the landfill and Remedial Action Plans for OU-1 and OU-2 that have been approved by all appropriate regulatory agencies, which include, but shall not be limited to, CalRecycle, the San Mateo County Environmental Health Department, the California Department of Toxic Substances Control, and the California Regional Water Quality Control Board (RWQCB);

Figure 2-7: Existing Brisbane General Plan Land Use Diagram



Residential

- Brisbane Acres Residential (0-2 DU/Acre) ***R***
- Central Brisbane Residential (2.5-14 DU/Acre) ***R***
- Central Brisbane Residential (15-30 DU/Acre) ***R***

Other

- Commercial Public Utilities ***CPU***
- Public Facilities and Parks ***PFP***
- Open Space ***OS***
- Marsh/Lagoon/Bayfront ***M/L/B***

Mixed Use

- Neighborhood Commercial/Retail/Office ***N C/R/O***
- Parkside Residential - Trade Commercial (20-28 DU/Acre)* ***PR - TC***
- Subregional Commercial/Retail/Office ***S C/R/O***

Commercial

- Sierra Point Commercial/Retail/Office **SP C/R/O**
- Trade Commercial ***TC***
- Heavy Commercial ***HC***

Planned Development

- Quarry Planned Development - Trade Commercial ***PD - TC***
- Guadalupe Hills Planned Development - Subregional Commercial/Retail/Office ***PD-S C/R/O***
- Baylands Planned Development - NonResidential ***PD - NR***
- Baylands Planned Development - Residential Permitted ***PD - RP***
- Northeast Ridge Planned Development - Residential** ***NER - PD - R***
  (Landmark: 5 DU/Acre, Viewpoint: 10 DU/Acre, Altamar: 15 DU/Acre)

- Brisbane City Limits
- Sphere of Influence **Outside Brisbane City Limit**

* Parkside residential density is by Precise Plan, as an overlay district within Crocker Park.
** Northeast Ridge residential density is as established in the Planned Development Permit

DU/Acre = Dwelling Units per Acre

September 5, 2019

- A specific schedule establishing the time frames by which (i) the landfill must be closed in full compliance with Title 27 and (ii) the remediation of OU-1 and OU-2 must be completed; and
- Specific means by which the City may enforce the applicant's adherence to the schedule for closure and remediation and specific consequences, e.g., monetary penalties, suspension of building permits, etc., that the City may impose on the applicant for failing to adhere to the schedule.

B. A reliable water supply approved by the City of Brisbane to support proposed uses within the Baylands shall be secured prior to site development.

C. All residential development shall be designed and remediated to accommodate ground level residential uses and ground level residential-supportive uses such as daycare, parks, schools, playgrounds, and medical facilities.

D. Each increment of development shall be provided with appropriate transportation related and other infrastructure, facilities, and site amenities as determined by the City. Such transportation related and other infrastructure, facilities, and site amenities (e.g., parks, open space preservation, habitat enhancement) shall be provided at the developer's cost.

E. Baylands development shall be revenue positive to the City on an annual basis where all City costs (e.g., annual operating costs, maintenance and replacement of equipment, facilities, infrastructure, cultural resource and habitat protection and management etc.) are exceeded by project-generated revenues to the City (e.g., to the City's General Fund, enterprise funds, special funds, etc.) during all phases of development and upon final buildout.

F. Sufficient assurances for the satisfactory ongoing performance of site remediation and site development (e.g., site monitoring, performance bonds, environmental insurance) shall be provided as determined by the City.

G. The required specific plan for the Baylands shall include a sustainability program for new development consistent with the principles of the Sustainability Framework for the Brisbane Baylands, Final Report accepted by the City Council on November 5, 2015. Baylands development shall be designed so as to be energy neutral on an ongoing basis.

H. Key habitat areas, including Icehouse Hill and Brisbane Lagoon and adjacent habitat as identified in the 2001 City Open Space Master Plan shall be preserved, enhanced, and protected.

I. The historic Roundhouse shall be protected and preserved. The required specific plan shall ensure rehabilitation of the Roundhouse for adaptive reuse at the developer's cost.

J. Development shall be designed to protect uses from the 100-year flood, including 100 years of projected sea level rise as determined based on regulatory standards or guidelines in effect at the time of project construction, with the reference to guidelines and sea level rise projections approved by the Director of Public Works/City Engineer based on context-specific considerations of risk tolerance and adaptive capacity.

K. Prior to the issuance of a grading permit to export soil or move soil from the existing landfill area for incorporation in a remediation or grading plan, the soil shall be tested in a manner approved by the City.

b. Housing Element

As required by state law, Brisbane's 2023–2031 Housing Element sets forth the City's plan to meet Brisbane's housing needs for all economic segments of the community from 2023 through 2031. The Housing Element establishes a quantified objective of establishing zoning to accommodate 1,588 dwelling units by January 2026.

The Specific Plan area represents approximately 81 percent of Brisbane's available inventory for the production of housing. As shown in Table 3-2 of the City's 2023–2031 Housing Element, Baylands development represents 45.7 percent of the City's quantified objective for very low-income housing, along with 44.8 percent of its low-income housing objective, 94.7 percent of its moderate-income housing objective, and 90.6 percent of the City's quantified objective for above moderate-income housing.

2.3.2 EXISTING ZONING

Six zoning districts currently apply within the Baylands Specific Plan area. The southern and eastern parts of the site are zoned Marsh Lagoon Bayfront (MLB), and the northern and western parts are zoned Commercial Mixed-Use (C-1). Lands along Industrial Way are currently zoned Manufacturing (M-1), and lands in the northeastern portion of the Baylands are zoned Heavy Commercial (C-3). **Figure 2-8** illustrates the current zoning of the Baylands.

- **Marsh Lagoon Bayfront District (MLB):** The MLB District was established to protect areas with unique aquatic resources, distinguish uses that rely on adjacency and access to aquatic and riparian areas, and establish application requirements to assure that proposed projects address the City's environmental goals for aquatic areas. The district requires a conditional use permit for all allowed uses, which include commercial recreation, personal services, retail sales and rental, educational facilities, scientific research, habitat restoration and wildlife protection, transit/transportation facilities, and marinas. Development regulations are determined by the use permit.

- **Commercial Mixed-Use District (C-1):** The purpose of the C-1 District is to (A) "provide a suitable environment for the development of tax revenue-producing commercial enterprise and to encourage the orderly development of the area so that opportunities are present to establish a mix of uses that support, enhance, and otherwise encourage the success of the district. There shall be no fabrication, manufacture, processing, or treatment of materials in this district other than that which is clearly incidental to a business where all products there from are sold on the premises;" and (B) "establish procedures to integrate commercial mixed-uses and structures that produce an attractive and safe environment which are superior to those which would result from standard district regulations."

  The C-1 District (Section 17.12.030 of the Brisbane Municipal Code) requires a conditional use permit for all development, with allowable conditional uses including retail sales, offices, residential uses, bulk sales, open space, recreational facilities, statuary, public and quasi-public facilities, service and utility uses, commercial services, hotels, research and development, and educational facilities. Under Section 17.13.040 of the Municipal Code, any development and design standards within an area zoned C-1 must be established in a specific plan adopted by resolution of the City Council for the parcels proposed for development. Section 17.13.040 states that to the extent that standards in the specific plan are inconsistent with other zoning regulations, the standards in the specific plan shall prevail.

- **Manufacturing District (M-1):** The M-1 District permits research and development, light manufacturing, assembling, processing, offices, warehousing, printing, and accessory retail uses. Conditional uses, which would require a use permit, include restaurant and bars connected with restaurant use, outside storage of trucks and equipment when properly screened, service stations, and destination retail uses. The district establishes a maximum floor area ratio of 2.0 and a maximum building height of 50 feet. Additional development regulations for the M-1 District are provided in Municipal Code Section 17.20.030.

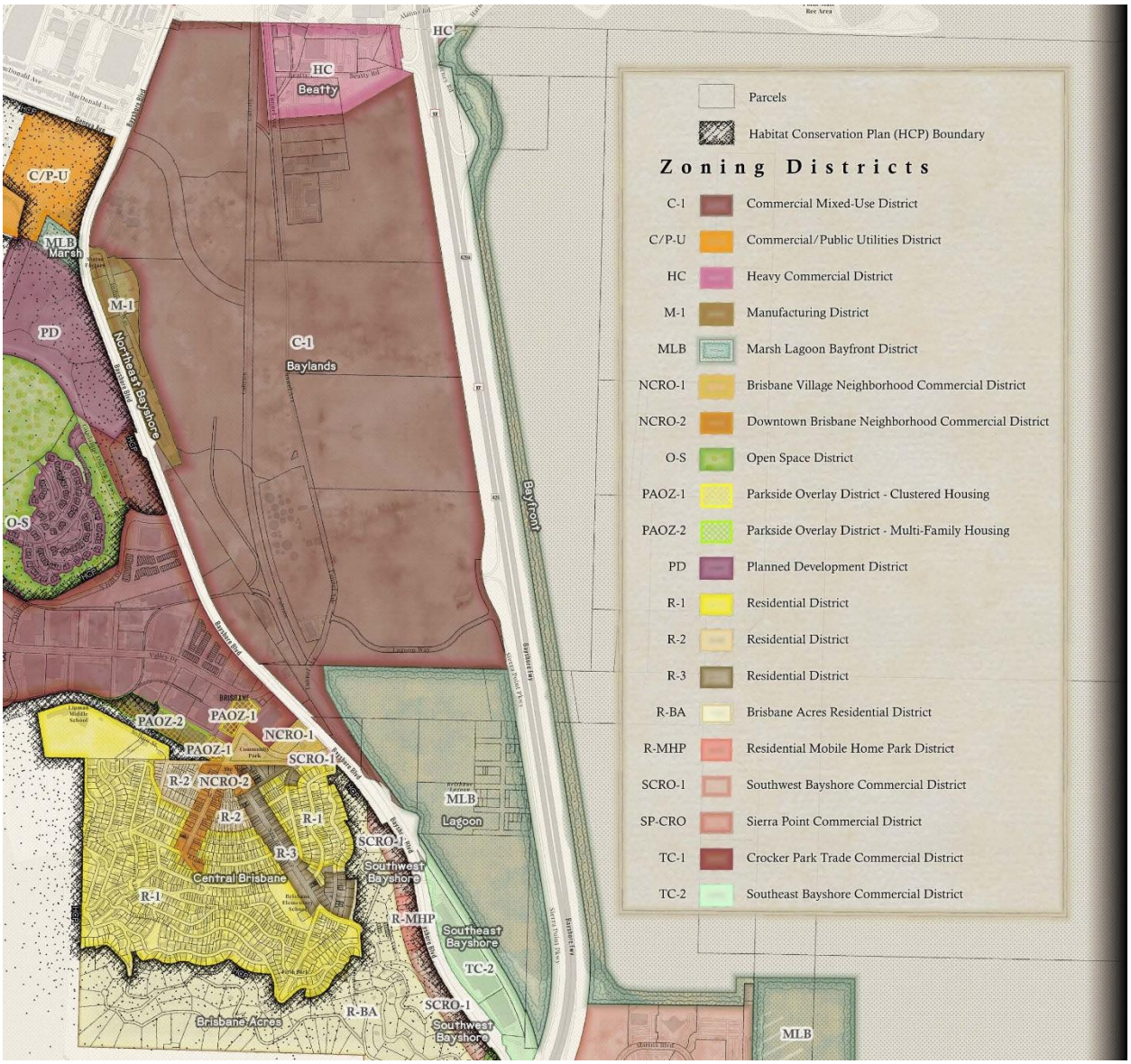
- **Heavy Commercial District (C-3):** The purpose of the C-3 District is to:

  A. "create a zoning district for the Beatty subarea that serves to protect and enhance its character and provide for orderly development consistent with the direction in the city's general plan;"

  B. "establish an attractive and safe environment for heavy commercial uses that is superior to that which would result from standard district regulations;"

  C. "provide a buffer between the industrial uses on adjacent properties in San Francisco and the planned development-trade commercial uses of the Baylands subarea;"

Figure 2-8: Existing City of Brisbane Zoning



D. "provide for heavy commercial uses that need large areas of land to accommodate outdoor storage of goods and equipment;"

E. "maintain a scale, character and intensity of use that can accommodate the desired uses for the district and be compatible with development in the other subareas of the city;" and

F. "protect the community health and safety by establishing permit requirements and performance standards that address potential impacts of heavy commercial activity."

The C-3 District requires a specific plan to be prepared and approved prior to development and a conditional use permit for all uses. Conditionally permitted uses include heavy equipment repair, meeting halls, offices, organics reload operations, outdoor storage of vehicles and equipment, outdoor storage of materials only in association with bulk sales, and plastic pipe sales.

2.4 HISTORY OF THE BAYLANDS SPECIFIC PLAN AND ENVIRONMENTAL REVIEW

2.4.1 SUBMITTAL OF THE BRISBANE BAYLANDS SPECIFIC PLAN

The initial Baylands Specific Plan application was filed in 2005 by the landowner, Sunquest Properties, Inc., requesting approval of a General Plan Amendment and a "Phase I Specific Plan" for development of approximately 449 acres of the Baylands site. The 2005 "Phase I Specific Plan," as it was then referred to, included a detailed plan for development of the western portion of the current Specific Plan area along with a "framework plan" addressing basic parameters for development of the eastern portion of the Baylands.

In 2011, the applicant submitted a revised Brisbane Baylands Specific Plan proposing 4,434 residential units, approximately 7 million sf of office/retail/industrial/institutional uses, approximately 169.7 acres of "open space/open area," and approximately 135.6 acres of "lagoon" area, with approximately 12.1 million sf of total building area within a 684-acre site. The 2011 Specific Plan also included a "variant" under which retail and office/research and development (R&D) uses in the northeast portion of the site would be replaced with entertainment-oriented uses, including a 17,000- to 20,000-seat sports arena, a 5,500-seat concert theater, a multiple-screen cinema, and more conference/exhibition space and hotel rooms.

2.4.2 BRISBANE BAYLANDS PROGRAM EIR (SCH #2006022136)

The Draft Brisbane Baylands Program EIR was circulated for public review from June 11, 2013, to January 24, 2014, and addressed:

- **Concept Plans** for the development of the Baylands at an equal level of detail for the following four scenarios:
    - ***Developer-Sponsored Plan (DSP)*** as defined in the 2011 *Draft Brisbane Baylands Specific Plan*, encompassing a 684-acre Specific Plan area. The DSP scenario proposed approximately 7 million sf of office/retail/industrial/institutional uses, 4,434 residential units, approximately 169.7 acres of "open space/open area," and approximately 135.6 acres of "lagoon" area.
    - ***Developer-Sponsored Plan – Entertainment Variant (DSP-V)***, which was similar to the DSP scenario, but replaced retail and office/R&D uses in the northeast

portion of the site with entertainment-oriented uses, including a 17,000- to 20,000-seat sports arena, a 5,500-seat concert theater, a multiple-screen cinema, and more conference/exhibition space and hotel rooms than were proposed under the DSP. New development under the DSP-V also included 4,434 residential units.

- ***Community Proposed Plan (CPP).*** The CPP scenario provided for approximately 7.7 million s.f. of office, industrial, commercial, hotel, R&D, and institutional uses, along with approximately 330 acres of open space/open area and the 135.6-acre lagoon, with no residential development. In addition to the 684-acre area included in the DSP scenario, the CPP scenario included the Recology site and adjacent roadway rights-of-way for a total area of 733 acres.
- ***Community Proposed Plan – Recology Expansion Variant (CPP-V).*** The CPP-V scenario encompassed the same 733-acre area as the CPP scenario and differed from the CPP scenario by proposing a substantial expansion of the existing Recology facility within the Baylands from 260,000 sf to 1,011,000 sf, replacing the hotel and R&D uses proposed under the CPP north of Geneva Avenue and east of Tunnel Road.

- **Amendments to the Brisbane General Plan** as needed to ensure consistency of proposed development with the provisions of the General Plan.
- The 2011 **Brisbane Baylands Specific Plan** detailing development for DSP and DSP-V Concept Plan scenarios.
- **Relocation of the two then-existing lumberyards** to a different location within the Baylands.
- **Remediation of hazardous materials** contamination within the former railyard and **Title 27 Final Landfill Closure** for landfill portion of the Baylands.
- **Importation of water supply of up to 2,400 acre-feet per year** (AFY) for the Baylands and City of Brisbane via a water transfer agreement with the Oakdale Irrigation District (OID).
- Construction and operation of an on-site **recycled water facility**, which would provide tertiary treatment of wastewater for recycled water re-use within the Baylands.

Subsequent to the Draft Program EIR public review period, a Final Program EIR was prepared consisting of:

- The Draft EIR and proposed revisions to the Draft EIR;
- Comments received on the Draft EIR during the public review period;
- The City's responses to the significant environmental issues raised in these comments; and
- A Mitigation Monitoring and Reporting Program.

The Draft and Final Program EIR certified by the City of Brisbane is available at:

- Draft EIR: https://archive.brisbaneca.org/baylands-deir
- Full set of comments on the Draft EIR: https://archive.brisbaneca.org/deir-comments
- Final EIR: https://archive.brisbaneca.org/baylands-final-eir-0

The Brisbane Planning Commission and City Council held public hearings to consider the Program EIR and the 2011 Specific Plan. In March 2018, the City Council directed City staff to draft for Council consideration a General Plan Amendment covering the Baylands area, including a range of 1,800 to 2,200 dwelling units and additional non-residential development, along with changes to General Plan policies governing development of the Baylands. These changes to the General Plan and its policies were adopted as General Plan Amendment GP-1-18 in August 2018.

a. Subsequent EIR: Relationship of the Baylands Specific Plan EIR to the Previous Program EIR

Under CEQA Guidelines Section 15162, when an EIR has been certified or a negative declaration adopted for a project, no subsequent EIR shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in the light of the whole record, one or more of the following:

(1) Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;

(2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or

(3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete, or the negative declaration was adopted, shows any of the following:

> (A) The project will have one or more significant effects not discussed in the previous EIR or negative declaration;
>
> (B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;

(C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or

(D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

The updated analyses provided in Chapter 4 evaluate the extent to which implementation of Program EIR mitigation measures would reduce the significant environmental effects of the 2025 Specific Plan project. Where application of Program EIR mitigation measures would not reduce impacts to less than significant, additional measures are provided to mitigate the new and substantially more severe impacts of the 2025 Specific Plan.

Chapter 9, "Subsequent EIR Analysis and Findings," analyzes whether the 2025 Specific Plan project would in any:

- New significant impact that was not previously identified in the Program EIR; or
- Substantially more severe significant impact than was previously identified in the Program EIR.

A complete listing of the mitigation measures from the adopted 2018 Mitigation Monitoring and Reporting Program (MMRP) is provided in Section 4.21, which indicates whether each Program EIR mitigation measure has been implemented by the 2025 Specific Plan project, carried forward from the Program EIR, or not carried forward from the Program EIR into this EIR.

2.4.3 GENERAL PLAN AMENDMENT GP-1-18 AND MEASURE JJ APPROVAL

When the Brisbane City Council certified the Baylands Program EIR, approved General Plan Amendment GP-1-18 (Resolution 2018-62), and submitted GP-1-18 to the voters for approval, the Brisbane City Council took no action on the 2011 Specific Plan, providing the applicant with the opportunity to revise the Specific Plan to conform to the provisions of GP-1-18. The full text of GP-1-18 (Measure JJ) is provided above in Section 2.3.1a.

2.4.4 GENERAL PLAN AMENDMENT GP-1-19

In adopting GP-1-18, Resolution 2018-62 directed City staff to "prepare for Council's consideration any other amendments to the General Plan or zoning ordinance as may be needed" to implement GP-1-18. In response, a set of revisions to Chapters II, V, VI, and XII of

the Brisbane General Plan (The Planning Area, Land Use, Circulation, and Policies and Programs by Subarea, respectively), was prepared to implement GP-1-18 by:

(1) Making revisions that clarified existing General Plan provisions and updated factual information in the General Plan, which was originally adopted in 1994.

(2) Incorporating GP-1-18 and Measure JJ into the General Plan and ensuring GP-1-18's consistency with the General Plan; and

(3) Revising roadway Level of Service (LOS) standards within the City in compliance with EIR Mitigation Measure 4.I-1.[37]

Because the General Plan revisions included in GP-1-19 were previously described and analyzed in the Brisbane Baylands Program EIR, the City determined that no additional environmental documentation in the form of a Subsequent or Supplemental EIR would be required and an addendum to the Baylands Final Program EIR was prepared pursuant to California Environmental Quality Act (CEQA) Guidelines Sections 15162 and 15164 to support adoption of General Plan amendment GP-1-19. On January 16, 2020, the City Council approved the Addendum and GP-1-19 in Resolution 2020-1.[38]

a. Revisions that Clarified General Plan Provisions and Updated Factual Information in the General Plan

General Plan Amendment GP-1-19 updated factual information and clarified existing provisions of the General Plan to correctly reflect the current name of landowners and describe current land uses and land use trends. GP-1-19 also reflected changes in state law that occurred subsequent to adoption of the General Plan in 1994. Historical discussion of the alternatives that were considered when the General Plan was adopted in 1994 were also deleted from the General Plan, along with historical discussion of the differences in land use designations between the previously adopted 1980 General Plan and the General Plan.

b. General Plan Revisions that Incorporated GP-1-18 and Measure JJ into the General Plan

GP-1-19 incorporated the previously adopted GP-1-18 and Measure JJ into the General Plan by inserting their specific text and graphics. This included deleting policies that were superseded by GP-1-18 and Measure JJ, revising policies for the Baylands Subarea to reflect the requirements of GP-1-18 and Measure JJ, and making text and graphic revisions needed to

[37] Recognizing that current roadway level of service standards (LOS D) would be exceeded due to future development in other cities even if no development within the Baylands would occur, Mitigation Measure 4.I-1 required General Plan roadway level of service standards (Policy 38.1, roadway level of service standards) be modified to accommodate the level of development approved for the Baylands.

[38] Resolution 2020-1 adopting General Plan amendment GP-1-19 can be found at https://www.brisbaneca.org/media/5396.

merge the Northeast Bayshore Subarea into the Baylands Subarea as required by GP-1-18 and Measure JJ.

c. Revisions to General Plan Level of Service (LOS) Standards for Bayshore Boulevard and Freeway Off-Ramp Intersections

Revisions to General Plan Chapter VI (Circulation) also modified General Plan Policy C.1 (*roadway level of service standards*) to ensure precise consistency between the Land Use and Circulation Elements, as required by Brisbane Baylands Program EIR Mitigation Measure 4.I-1, which states:

> **4.I-1:** Recognizing that General Plan roadway level of service standards will be exceeded due to development in other cities even if no development within the Baylands occurs, General Plan Policy C.1 (*roadway level of service standards*) shall be amended to reflect current traffic conditions; developments approved by the cities of San Francisco, Daly City, and South San Francisco that exceed long-term traffic projections set forth in the 1994 Brisbane General Plan; and the land use program approved in the Baylands General Plan Amendment.

The revisions to General Plan Policy C.1 (*roadway level of service standards*):

- Created a new category of roadways, Regional Routes,[39] designated Bayshore Boulevard and Geneva Avenue as Regional Arterial Routes, and set forth the rationale for distinguishing these roadways from other principal and minor arterial roadways within the City.
- Replaced existing LOS standards for intersections along Bayshore Boulevard and Geneva Avenue with:
    - Preparation and implementation of a mobility plan for Bayshore Boulevard from Geneva Avenue to San Bruno Avenue.
    - A requirement for new development within the City generating more than 50 peak hour trips on Bayshore Boulevard or Geneva Avenue to comply with the applicable multi-modal mobility plan(s) by either providing physical improvements consistent with the plan(s) or making a fair share payment for plan improvements pursuant to a citywide traffic impact fee program to be adopted by the City.[40] As part of the mobility plan for Bayshore Boulevard, the City would develop citywide traffic impact fees based on a nexus study.

[39] "Regional Routes," as used in proposed revisions to the General Plan, refers to US Highway 101 (Freeway) and Bayshore Boulevard (Regional Arterial).

[40] Compliance with the provisions of the required mobility plan for Bayshore Boulevard by Baylands development would replace the LOS-based mitigation requirements set forth in the Program EIR.

- Replaced existing LOS standards at intersections with freeway off-ramps along US 101 with a new Policy C.3 addressing queueing of vehicles along freeway off-ramps and at intersections to prevent traffic on a freeway off-ramp from backing up onto the freeway mainline or traffic at an intersection from backing up into another intersection.
- Maintained the current standard of LOS D at all other intersections along principal and minor arterials (i.e., all existing arterial roadways within Brisbane other than those along Bayshore Boulevard, Geneva Avenue, and at freeway interchanges).
- Reorganized Chapter VI (Circulation) and modified or added policies and programs to put greater emphasis on multi-modal mobility for Brisbane residents and businesses, accommodation of bicycles and pedestrians in addition to vehicular movement, and provisions for comfortable and safe travel from within the community to shopping, employment, recreation, transit, and US 101.
- Established criteria defining when traffic impact analyses would be required to confirm compliance of proposed development projects with the City's LOS standard.

2.4.5 SUBMITTAL AND MODIFICATIONS TO THE 2025 BAYLANDS SPECIFIC PLAN PROJECT

In January 2023, the applicant resubmitted its proposed Specific Plan to modify and replace the 2011 Specific Plan with the intent of complying with GP-1-18 and Measure JJ. While the 2023 Specific Plan included all lands owned by the applicant within the Baylands, it excluded lands not owned by the applicant, identifying them as "not a part." To provide for adoption of a single specific plan for the entirety of the Baylands as required by the General Plan, modifications were proposed to the Specific Plan submitted by the applicant and other project components were proposed by the City. Together, the 2023 Specific Plan submitted by the applicant (Appendix A.1), as modified in 2025 (see Appendix A.2), and additional components proposed by the City are referred to as the "2025 Specific Plan project," which is analyzed in this EIR (see **Table 2-1**, **Figure 2-9**, and **Figure 2-10**). Areas added to the applicant's 2023 Specific Plan include the following existing uses:

- Recology parcels along Tunnel Avenue
- Golden State Lumber Company
- Kinder Morgan Tank Farm
- City of Brisbane Corporation Yard
- Bayshore Sanitary District pump station
- Machinery & Equipment Building
- Brisbane Fire Station No. 81

These areas are assumed in this EIR to retain their existing use and development intensity. The existing Brisbane Fire Station No. 81 is proposed, however, to be relocated to 140 Valley Drive and the existing site will be used by the North County Fire Authority for training purposes once the relocated station is operational.

Table 2-1: Comparison of Land Use Acreage between the Specific Plan Submitted by the Applicant and Baylands Development Analyzed in this EIR

Land Use	2023 Specific Plan as Submitted by the Applicant			Proposed 2025 Specific Plan for the Entirety of the Baylands Analyzed in this EIR		
	Area West of Caltrain (in acres)[a]	Area East of the Caltrain (in acres)[a]	Baylands Total	Area West of Caltrain (in acres)[a]	Area East of the Caltrain (in acres)[a]	Baylands Total
Land Area						
Residential	52.8	0.0	**52.8**	52.8	0.0	**52.8**
Commercial	48.8	78.3	**127.1**	48.8	78.3	**127.1**
Amenities Area	2.6	0.0	**2.6**	2.6	0.0	**2.6**
Existing Use Areas[b]	0.0	0.0	0.0	5.8[c]	32.5[d]	**38.3**
Open Space/Open Area	59.4	97.6	**157.0**	59.4	97.6	**157.0**
Sustainable Infrastructure	0.0	90.8	**90.8**	0.0	90.8	**90.8**
Roadway Rights-of-Way	37.4	26.3	**63.7**	37.4	26.3	**63.7**
Subtotal	*201.0*	*293.0*	*494.0*	*206.8*	*325.5*	*532.3*
Water						
Brisbane Lagoon	0.0	121.8	**121.8**	0.0	121.8	**121.8**
Existing Land Area that will be Inundated on a Daily Basis due to Sea Level Rise by 2100	0.0	26.0	**26.0**	0.0	26.0	**26.0**
Subtotal	*0.0*	*147.8*	*147.8*	*0.0*	*147.8*	*147.8*
TOTAL	**201.0**	**440.8**	**641.8**	**206.8**	**473.3**	**680.1**

SOURCES: The Baylands Specific Plan, 2023; City of Brisbane 2024.

NOTES:

a. Acreages are based on Year 2100 land area following approximately 83 inches of sea level rise.
b. Represents lands not owned by the applicant.
c. Includes Machinery & Equipment building (2.2 acres) and existing fire station site (3.6 acres).
d. Includes Recology Facilities (3.6 acres), Golden State Lumber (5.3 acres), Bayshore Sanitation Pump Station (0.1 acres), and Kinder Morgan Tank Farm/City Corporation Yard site (23.5 acres).

Figure 2-9: Baylands Land Use Proposed by the Applicant in its 2023 Specific Plan

Figure 2-10: Proposed 2025 Specific Plan Land Use Analyzed in this EIR

2.5 SITE REMEDIATION AND TITLE 27 LANDFILL CLOSURE

Implementation of remedial actions and final landfill closure is proposed to occur within the Baylands on a phased basis. As a result, construction of Baylands buildings and infrastructure within areas subject to remediation or landfill closure is permitted to proceed only after the appropriate regulatory agency certifies completion of remedial actions or final landfill closure for the construction site. **Figure 2-11** illustrates agency regulatory responsibilities for site remediation and landfill closure. Remediation within the western portion of the Baylands (former rail yard) would occur subject to the regulatory oversight of the State of California. Operable Unit 1 (OU-SM), in the northern portion of the former railyard, is under the jurisdiction of the California Department of Toxic Substances Control (DTSC); Operable Unit 2 (OU-2), in the southern portion of the former railyard, is under the jurisdiction of the RWQCB. Final landfill closure would be subject to the regulatory authority of the RWQCB and San Mateo County Environmental Health Agency. Remediation of the adjacent Schlage Lock site in San Francisco is subject to DTSC's regulatory oversight.

a. Remedial Action Plan for Operable Unit-SM

DTSC approved a Feasibility Study/Remedial Action Plan (FS/RAP) and accompanying Human Health Risk Assessment (HHRA) for the portion of the Baylands known as Operable Unit-SM (OU-SM) in October 2021.[41] The OU-SM site is approximately 35 acres in size and occupies the northern portion of the former railyard within the Baylands (see **Figure 2-9**).

The FS/RAP establishes remedial action objectives consisting of site-specific, quantitative goals that define the extent of cleanup required to achieve the appropriate level of protectiveness for human health and the environment along with media-specific cleanup levels for:

- **Soil:** Arsenic, lead, mercury, carcinogenic PAHs, naphthalene, TPH-d, and Aroclor-1260.
    - *Remedial Action Objective:* Prevent exposure to soil with constituents of concern exceeding cleanup levels by eliminating the exposure pathway for future receptors, which include incidental ingestion, inhalation of windblown dust particles, and dermal contact.

[41] The approved Feasibility Study/Remedial Action Plan and RWQCB approval letter can be found at https://www.baylandsou2.com/.

Figure 2-11: Agency Regulatory Responsibilities for Baylands Site Remediation and Landfill Closure

2.5.2 SITE REMEDIATION

- **Soil vapor:** Chlorinated volatile organic compounds (CVOCs) (1,1-dichloroethene; cis-1,2-dichloroethene; trans-1,2-dichloroethene; tetrachloroethene; trichloroethene, and vinyl chloride).
    - *Remedial Action Objective:* Prevent exposure to CVOCs in soil vapor at concentrations that exceed the cleanup levels for soil vapor by either demonstrating through a site-specific risk assessment that no significant risk is present, or by blocking or minimizing the vapor intrusion pathway from CVOCs in soil vapor that originate from the Schlage OU groundwater plume.
- **Groundwater:** CVOCs (1,1-dichloroethene; cis-1,2-dichloroethene; trans-1,2-dichloroethene; tetrachloroethene; trichloroethene, and vinyl chloride).
    - *Remedial Action Objective:* Prevent exposure to CVOCs in groundwater associated with the Schlage OU CVOC plume by eliminating inhalation risks through the vapor intrusion pathway where significant risk exists, preventing ingestion and dermal contact through the use of groundwater for potable and agricultural purposes, and minimizing dermal exposure of CVOCs and metals in groundwater to construction workers. Treatment of CVOCs in groundwater that migrated beneath the site from the Schlage OU will continue, as directed in the Schlage OU RAP, until the cleanup levels established for the Schlage OU cleanup have been met.

Required Remedial Actions

Placement of Soil Cap

Fill soil will be imported to the site to raise the elevation to the final grade and cap the existing soil containing constituents of concern above cleanup levels. Prior to constructing the clean soil cap, a demarcation layer consisting of a bright-colored geotextile fabric will be placed atop the existing soil to indicate the contact between the clean soil cap and the underlying material. Imported fill material for the soil cap will be required to satisfy criteria established by DTSC in Appendix D of the FS/RAP.

Following clean soil cap placement, utility trenches/corridors that require excavation into the existing soil will be excavated, followed by installation of a demarcation geotextile fabric along the bottom and sides of the utility trench to indicate the contact between the clean utility trench backfill and the existing soil and permit trenches/corridors to be re-excavated in the future for utility repair or additional utility installation without coming into contact with residual contamination in the existing underlying soil.

All earthwork at the site will be conducted in accordance with a dust control plan to be approved by DTSC that will define methods to be used for dust monitoring and procedures for minimizing dust emission. The generation of airborne dust is to be controlled by one or more of the following methods:

- Dampening active earthwork areas with clean water;
- Installing rumble strips or similar to prevent site soils from being tracked out of the site and onto public roads;
- Decontaminating haul trucks and equipment prior to their leaving the site;
- Covering/stabilizing soil stockpiles;
- Restricting the height from which soil can be dropped from an excavator bucket into a haul truck; and
- Stopping work if wind speeds exceed a pre-determined threshold.

All earthwork will also be required to be conducted in accordance with a stormwater pollution prevention plan (SWPPP) to minimize impacts to the local stormwater conveyance system and receiving waters. The SWPPP will identify best management practices for controlling stormwater and preventing sediment transport in run-off at the site during construction.

Excavation with Partial On-Site Relocation and Partial Off-Site Disposal of Soils

In areas where impacted soil cannot be capped in-place with hardscape or a minimum of 5 feet of clean fill, such as along Bayshore Boulevard, the impacted soil will be excavated and either relocated on-site beneath a cap (e.g., roadways, building foundations, concrete areas, asphalt parking lots, or 5 feet of clean soil) or transported off-site to an appropriate disposal facility. All soil excavation, stockpiling, relocation, and/or off-site hauling will be conducted in accordance with the Dust Control Plan and SWPPP to be approved by DTSC.

Soil Vapor Mitigation

After the site has been capped and regraded to the new development elevation, and after soil vapor concentrations have reached steady state at the target sample depth(s), soil vapor sampling will be conducted at proposed building locations to assess, at a screening level, the potential need for vapor mitigation systems in buildings planned for construction. The soil vapor sampling plan will be prepared in accordance with applicable DTSC guidance documents on evaluating vapor intrusion and will be submitted to DTSC for approval in advance of field work. If CVOC concentrations in soil vapor in areas where buildings are planned exceed the screening levels, either DTSC-approved vapor mitigation systems will be included in the design of those buildings, or a site-specific risk assessment will be prepared. The design and installation of vapor intrusion mitigation systems, or demonstration that site conditions pose no significant risk to human health based on the site-specific risk assessment, will be the

responsibility of the developer or property owner and will require DTSC approval. In areas where CVOC concentrations in soil vapor exceed risk-based site-specific cleanup levels, two rounds of indoor air sampling will be conducted post-construction to verify attenuation factor assumptions and test for seasonality. Additional indoor air sampling may be required based on exceedance of health-based screening levels.

Land Use Restrictions

One or more land use covenants will be recorded on the title to the properties within OU-SM with restrictions to limit human exposures to contaminants left in place in soil, soil vapor, and groundwater above levels considered protective of unrestricted use of the site. The Land Use Covenant(s) will include the following restrictions:

- No occupied buildings, including sensitive uses, where CVOC concentrations in soil vapor exceed cleanup levels without DTSC approval based on either (1) a risk assessment demonstrating site conditions pose no significant risk to human health, or (2) engineering controls, such as building design or gas intrusion mitigation systems, that will reduce the risk to an acceptable level;
- No growing produce or vegetables for human consumption in native soil. Plants for human consumption may be grown if they are planted in raised beds (above the approved cover) containing non-native soil. Trees producing edible fruit (including trees producing edible nuts) may also be planted provided they are grown in containers with a bottom that prevents the roots from penetrating the native soil;
- No extraction or use of underlying groundwater is allowed without a Groundwater Management Plan pre-approved by DTSC;
- No drilling for any water, oil, or gas, or extraction or removal of groundwater may occur without a DTSC-approved Groundwater Management Plan and prior written approval by DTSC;
- No interference with, or modification of, a vapor mitigation system shall be permitted without prior written approval by DTSC, and future tenants must provide reasonable access for operations and maintenance (O&M) of vapor mitigation systems;
- All excavation into the cap shall comply with the DTSC-approved Soil Management Plan;
- Contaminated soils brought to the surface by grading, excavation, trenching, or backfilling shall be managed in accordance with all applicable provisions of state and federal law and a DTSC-approved Soil Management Plan; and
- All uses and development of the site shall preserve the integrity and effectiveness of the cap.

Operations and Maintenance (O&M)

Site inspections are to be conducted on an annual basis to evaluate the effectiveness of the cap and ensure compliance with the Land Use Covenant(s). The O&M program will be detailed in a plan to be approved by DTSC and will generally consist of annual inspections to verify that the soil cap is not eroding, that engineered cap materials are in good condition, that unauthorized wells providing access to restricted groundwater or unauthorized excavations into impacted soil have not been constructed, and that vapor intrusion mitigation systems are operating as designed. A Soil Management Plan will also be prepared that will specify the protocols to be followed for excavating into and beneath the cap. An inspection report will be submitted to DTSC for review and approval on an annual basis. All O&M activities will be the responsibility of the site owner and will be governed by an O&M Agreement with DTSC.

Remedial Design and Implementation Plan

Prior to physical site remediation, preparation of one or more Remedial Design and Implementation Plans (RDIPs) for DTSC review and approval is required. The RDIP(s) will contain a detailed description of the remedial work to be performed as well as the plan for implementation. The RDIP(s) will include design drawings, a health and safety plan, procedures for minimizing fugitive dust emission, the program for monitoring air and dust during remedial construction, procedures for managing stormwater during remedial construction, an adaptive management strategy for sea level rise that provides technical justification for year 2100 protective strategies, a traffic plan for the import and off-haul of soil, and a plan for restricting site access to authorized personnel only.

It is anticipated that the remedial action activities for OU-SM will be phased, and that separate RDIPs and Remedial Action Completion Reports would be prepared for each phase after completion of the remedial action. However, if the remedy is implemented at one time, a single Remedial Action Completion Report would be prepared. After each remedial action is completed, a location-specific O&M plan will be prepared, and land use covenant(s) will be recorded. The Completion Reports will provide a description of work completed, a summary of any deviations from the FS/RAP, and verification that cleanup levels were met or site protectiveness was achieved. Each Completion Report will also include a request that DTSC certify the completion of the remedial actions once the O&M plan and land use covenants are in place.

b. Remedial Action Plan for Operable Unit-2

The San Francisco Bay RWQCB approved a Feasibility Study/Remedial Action Plan (FS/RAP) and accompanying Human Health Risk Assessment (HHRA) for the portion of the Baylands known as Operable Unit-2 (OU-2) in December 2021.[42] The OU-2 site is approximately 130 acres in size and occupies the southern portion of the former railyard within the Baylands (see **Figure 2-9**).

The FS/RAP establishes remedial action objectives for OU-2 that consist of site-specific, quantitative goals defining the extent of cleanup required to achieve the appropriate level of protectiveness for human health and the environment along with media-specific cleanup levels for:

- **Soil:** Arsenic, lead, TPH-d in Zones 1, 2, 3, 5, and 6; lead and TPH-d in Zone 4; and PCE, TCE, cis-1.2-DCE, and vinyl chloride in soil in CVOC area.
    - *Remedial Action Objective:* Prevent exposure to soil with constituents of potential concern[43] (COPCs) at concentrations exceeding cleanup levels by eliminating the exposure pathway for future receptors, which include incidental ingestion, inhalation of windblown dust particles, and dermal contact.
- **Soil vapor (based on groundwater evaluation):** Benzene and vinyl chloride sitewide, and PCE, TCE, cis-1.2-DCE, and vinyl chloride in CVOC area, and CVOCs (1,1-dichloroethene; cis-1,2-dichloroethene; trans-1,2-dichloroethene; tetrachloroethene; and trichloroethene, and vinyl chloride).
    - *Remedial Action Objective:* Prevent exposure to volatile organic compounds (VOCs) in soil vapor at concentrations that exceed the cleanup levels for soil vapor by blocking or minimizing the vapor intrusion pathway.
- **Groundwater (vapor intrusion pathway only):** Benzene and vinyl chloride sitewide, and PCE, TCE, cis-1.2-DCE, and vinyl chloride in CVOC area groundwater.
    - *Remedial Action Objective:* Prevent exposure to VOCs in groundwater by eliminating inhalation risks through the vapor intrusion pathway and preventing ingestion and dermal contact through the use of groundwater for potable and agricultural purposes.

The FS/RAP approved by the RWQCB involves "pre-development" and "remediation/ mitigation" activities that the FS/RAP permits to be "conducted prior to or concurrent with development activities." These required activities are described below.

[42] The approved Feasibility Study/Remedial Action Plan can be found at https://www.baylandsou2.com/.

[43] Also called "chemicals of potential concern" in EPA guidance, are defined as "chemicals that are potentially site-related and where data are sufficient quality for use in the quantitative risk assessment." https://semspub.epa.gov/work/11/176250.pdf.

Soil Assessment Following Demolition of Existing Buildings

Following abatement of any hazardous materials and demolition of structures within OU-2, a post-demolition soil assessment will be undertaken, targeting areas where chemical releases would have an elevated likelihood of occurrence, such as sumps and floor drains. Shallow soil samples will also be collected from the area of the former hide and glue factory to be analyzed for pentachlorophenol (PCP).

Decommissioning of Existing Groundwater Wells

Existing groundwater wells will be decommissioned prior to soil import and grading. All well decommissioning is required to be completed pursuant to a permit from San Mateo County Environmental Health in accordance with an RWQCB-approved work plan.

Excavation with Partial On-Site Relocation and Partial Off-Site Disposal of Soils

In areas where soil cannot be capped in-place with a minimum of 5 feet of clean fill, such as along Bayshore Boulevard, the impacted soil will be excavated and either relocated beneath roadways, hardscape (e.g., building foundations, concrete areas, asphalt parking lots), or a minimum of 1 foot beneath clean utility corridors. Alternatively, impacted soil may be transported off-site to an appropriate disposal facility. The FS/RAP anticipates that up to 10,000 bank (12,000 bulk) cubic yards of soil will be excavated and relocated on-site and another 10,000 bank (12,000 bulk) cubic yards of soil excavated for off-site hauling and disposal. All soil excavation, stockpiling, relocation, and/or off-site hauling will be conducted in accordance with the Dust Control Plan and SWPPP to be approved by the RWQCB as part of a required Remedial Design and Implementation Plan (RDIP).

Excavation and On-Site Ex Situ Treatment and Relocation of Soils

In areas where Total Petroleum Hydrocarbon (TPH) concentrations exceed cleanup levels, the FS/RAP states that "free-phase petroleum is potentially mobile within the soil matrix, and off-site disposal would not be cost-effective." As a result, the FS/RAP retains on-site treatment of TPH-impacted soil as an option.

Placement of Soil Cap

Fill soil will be imported to OU-2 to raise the elevation to the final grade and cap the existing soil containing constituents of concern above cleanup levels. Prior to constructing the soil cap, a bright-colored demarcation geotextile fabric will be placed above the existing soil to indicate the contact between the clean soil cap and the underlying material wherever constituents of concern exceed cleanup levels. Imported fill material for the soil cap will be required to satisfy criteria established by DTSC in Appendix F of the FS/RAP.

Following clean soil cap placement, planned utility trenches/corridors that require excavation into the existing soil will be excavated, followed by installation of a demarcation geotextile fabric along the bottom and sides of the utility trench to indicate the contact between the clean utility trench backfill and the existing soil and permit trenches/corridors to be re-excavated in the future for utility repair or additional utility installation without coming into contact with residual contamination in the existing underlying soil.

All earthwork at the site will be conducted in accordance with a dust control plan to be approved by the RWQCB as part of the RDIP that will define methods to be used for dust monitoring and procedures for minimizing dust emission. The generation of airborne dust is to be controlled by one or more of the following methods:

- Dampening active earthwork areas with clean water;
- Installing rumble strips or similar to prevent site soils from being tracked out of the site and onto public roads;
- Decontaminating haul trucks and equipment prior to their leaving the site;
- Covering/stabilizing soil stockpiles;
- Restricting the height from which soil can be dropped from an excavator bucket into a haul truck; and
- Stopping work if wind speeds exceed a pre-determined threshold.

All earthwork will also be required to be conducted in accordance with a SWPPP to minimize impacts to the local stormwater conveyance system and receiving waters. The SWPPP will identify best management practices for controlling stormwater and preventing sediment transport in run-off at the site during construction.

Groundwater Remediation Program

The FS/RAP states that in situ groundwater remediation will be implemented "to reduce Volatile Organic Compounds in groundwater to below clean-up levels for the vapor intrusion pathway to the extent practicable" and that groundwater remedial action "will be planned and implemented to achieve groundwater clean-up levels to the extent practicable."

Groundwater Monitoring Program

Groundwater monitoring will be implemented. The specific design of the well network and frequency of monitoring is to be determined in the RDIP to be approved by the RWQCB. Groundwater monitoring wells will be placed within OU-2 after installation of the soil cap.

Soil Vapor Mitigation

After the site has been capped and regraded to the new development elevation, and the groundwater remedy has been implemented, soil vapor sampling will be conducted in accordance with RWQCB soil vapor guidance to determine the necessity of a vapor mitigation system.

Land Use Restrictions

One or more land use covenants will be recorded on the title to the properties within OU-2 with restrictions to limit human exposures to contaminants left in place in soil, soil vapor, and groundwater above levels considered protective of unrestricted use of the site. The Land Use Covenant(s) will include the following restrictions:

- No occupied buildings, including sensitive uses, where CVOC concentrations in soil vapor exceed cleanup levels without RWQCB approval based on either (1) a risk assessment demonstrating site conditions pose no significant risk to human health, or (2) engineering controls, such as building design or gas intrusion mitigation systems, that will reduce the risk to an acceptable level;
- No growing produce or vegetables for human consumption in native soil. Plants for human consumption may be grown if they are planted in raised beds (above the approved cover) containing non-native soil. Trees producing edible fruit (including trees producing edible nuts) may also be planted provided they are grown in containers with a bottom that prevents the roots from penetrating the native soil;
- No extraction or use of underlying groundwater is allowed without a Groundwater Management Plan pre-approved by the RWQCB;
- No drilling for any water, oil, or gas, or extraction or removal of groundwater may occur without an RWQCB-approved Groundwater Management Plan and prior written approval by the RWQCB;
- No interference with, or modification of, a vapor mitigation system shall be permitted without prior written approval by DTSC, and future tenants must provide reasonable access for O&M of vapor mitigation systems;
- All excavation into the cap shall comply with the RWQCB-approved Soil Management Plan;
- Contaminated soils brought to the surface by grading, excavation, trenching, or backfilling shall be managed in accordance with all applicable provisions of state and federal law and an RWQCB-approved Soil Management Plan; and
- All uses and development of the site shall preserve the integrity and effectiveness of the cap.

2.5.3 TITLE 27 LANDFILL CLOSURE

Consistent with landfill practices at that time it was operational, no liner was installed at the Brisbane Landfill prior to waste placement. Instead, the waste material was placed directly into the water on top of the Young Bay Mud. Also consistent with landfill practices at that time, leachate collection and removal systems were not utilized. Upon completion of disposal operations, waste material was covered with earth fill and other inert materials. In accordance with Section 20260 of Title 27 of the California Code of Regulations (hereafter referred to as Title 27), the Brisbane Landfill is classified by the RWQCB as a closed, unlined Class III landfill (BKF 2022).

a. Title 27 of California Code of Regulations, Solid Waste

The California Department of Resources Recycling and Recovery (CalRecycle) (formerly the California Integrated Waste Management Board) regulates the closure and post-closure activities at landfill sites through Title 27 of the California Code of Regulations (CCR). A Local Enforcement Agency (LEA) is designated by CalRecycle to perform oversight of post-closure land uses at disposal sites.

For the Brisbane Landfill, regulatory authority for closure and post-closure activities rests with the Regional Water Control Board – San Francisco Region and the San Mateo County Environmental Health Services Division, which serves as the Local Enforcement Agency (LEA). The California Air Resources Board (CARB), which regulates stationary and mobile air emission sources, also has enforcement authority. Landfill gas is regulated by CARB through the Bay Area Air Quality Management District (BAAQMD).

The requirements for post-closure land use of solid waste disposal sites are described in CCR Title 27, Section 21190, which requires that the proposed post-closure land use be designed and maintained to:

- Protect public health and safety and prevent damage to structures, roads, utilities, and gas monitoring and control systems;
- Prevent public contact with waste, landfill gas (LFG), and leachate; and
- Prevent landfill gas explosions.

Although the regulatory requirements described in CCR Title 27, Section 21190, apply to landfills that were operating on or after January 1, 1988, the LEA Advisory #51 dated July 22, 1998, states:

> If a significant change in post-closure land use is proposed for these sites (sites that ceased operating prior to January 1, 1988), a post-closure land use proposal should be submitted to the LEA to address compliance with 27 CCR 21190. The LEA is required to

approve the proposed post-closure land use if the project site development involves structures within 1,000 feet of the disposal area, structures on top of waste, modification of the low permeability layer, or irrigation over waste (27 CCR 21190(c)).

The provisions of CCR Title 27, Section 21090, applicable to the former Brisbane Landfill include:

- **Final Cover Requirements**
    - **Slopes.** Final cover slopes are generally not permitted to be steeper than a 1:1.75 horizontal to vertical ratio and are to have a minimum of one 15-foot-wide bench for every 50 feet of vertical height. The RWQCB can require flatter slopes or more benches where necessary to ensure preservation of the integrity of the final cover.
    - **Cover Layers**
        - *Foundation Layer.* Closed landfills are to be provided with not less than 2 feet of appropriate materials as a foundation layer for the final cover. These materials may be soil, contaminated soil, incinerator ash, or other waste materials, provided that such materials have appropriate engineering properties to be used for a foundation layer, which is to be compacted to the maximum density obtainable at optimum moisture content using methods that are in accordance with accepted civil engineering practice. A lesser thickness may be allowed for units if the RWQCB finds that differential settlement of waste, and ultimate land use, will not affect the structural integrity of the final cover.
        - *Low-Hydraulic-Conductivity Layer.* In order to protect water quality by minimizing the generation of leachate and landfill gas, closed landfills are to be provided with a low-hydraulic-conductivity (or low through-flow rate) layer, consisting of not less than 1 foot of soil containing no waste or leachate, that is placed on top of the foundation layer and compacted to prevent percolation of water.
        - *Erosion-Resistant Layer.* The low-hydraulic-conductivity layer of a closed landfill is to be directly overlain by an erosion-resistant uppermost cover layer consisting of either:
            - A vegetative layer[44] or

[44] The species mix for such vegetation is required to harmonize with the proposed post-closure land use and need as little long-term maintenance as feasible by virtue of its tolerance of the vegetative layer's soil conditions (e.g., the presence of landfill gas [LFG]), its resistance to foreseeable adverse environmental factors (e.g., climate, disease, and pests), its rapidity of germination and growth, its persistence and ease of self-propagation, its high percentage of surface coverage (sufficient to prevent surface erosion), and its minimal need for irrigation and maintenance.

- A mechanical erosion and ultraviolet light-resistant layer, consisting of not less than 1 foot of soil that contains no waste, covers the entire low-hydraulic-conductivity layer, and is initially planted—and is later replanted as needed to provide effective erosion resistance—with native or other suitable vegetation having a rooting depth not exceeding the depth to the top of the low-hydraulic-conductivity layer.

- **Cover Maintenance Plan**
    - The Final Closure and Post-Closure Maintenance Plan is to incorporate a cover-integrity monitoring and maintenance program that includes at least the following components:
        - *Periodic Leak Search* – a schedule for carrying out periodic monitoring of the integrity of the low-hydraulic-conductivity layer, including a method for effectively identifying and repairing breaches in that layer;
        - *Periodic Identification of Other Problem Areas* – a schedule for periodically identifying and addressing other cover problems;
        - *Prompt Cover Repair* – a plan for repairing, in a timely manner, any breach or other cover problem that is discovered; and
        - *Vegetation Maintenance* – a plan for maintaining vegetative cover, including fertilization, irrigation, elimination of species that violate the rooting depth limit, replanting, and irrigation system maintenance.
- **Leachate and Landfill Gas Control System**
- **Grading and Drainage Plan to Prevent Ponding and Erosion**
- **General Post-Closure Duties**
    - Maintain the structural integrity and effectiveness of all containment structures, and maintain the final cover as necessary to correct the effects of settlement or other adverse factors;
    - Continue to operate the leachate collection and removal system as long as leachate is generated and detected;
    - Maintain monitoring systems and monitor the groundwater, surface water, and the unsaturated zone;
    - Prevent erosion and related damage of the final cover due to drainage; and
    - Protect and maintain surveyed monuments.

Under these requirements, the RWQCB can allow any alternative final cover design that it finds will continue to isolate the waste from precipitation and irrigation waters and complies with the applicable prescriptive standards listed above.

Final Landfill Closure and Post-Closure Maintenance Plan for Former Brisbane Landfill

The RWQCB adopted Waste Discharge Requirements in 2001 to bring the landfill into compliance with the appropriate portions of Title 27 and to establish a discharge monitoring program for the landfill. Since the issuance of the Waste Discharge Requirements in 2001, the RWQCB has required periodic monitoring of groundwater and leachate conditions. No notices of violation have been issued by the RWQCB during this time. Groundwater monitoring and landfill gas (LFG) monitoring continue on an annual basis as required by the Waste Discharge Requirements. Remedial activities to date have included installation of a gas collection and controls system and construction of a leachate seep collection and transmission system to address Brisbane Lagoon shoreline seeps.

A Closure and Post-Closure Maintenance Plan was prepared in accordance with Title 27 and the RWQCB waste discharge requirements and approved by the RWQCB and San Mateo County Environmental Health Services Division. In addition to the submittals to the RWQCB, San Mateo County Environmental Health Services, and CalRecycle, the Landfill Gas Collection and Control System Design Plan (a component of the Closure and Post-Closure Maintenance Plan) is required to be separately submitted to the BAAQMD for review and approval. This plan will identify how remaining subsurface gas (i.e., methane) generated by the closed landfill will be collected, treated, and monitored.

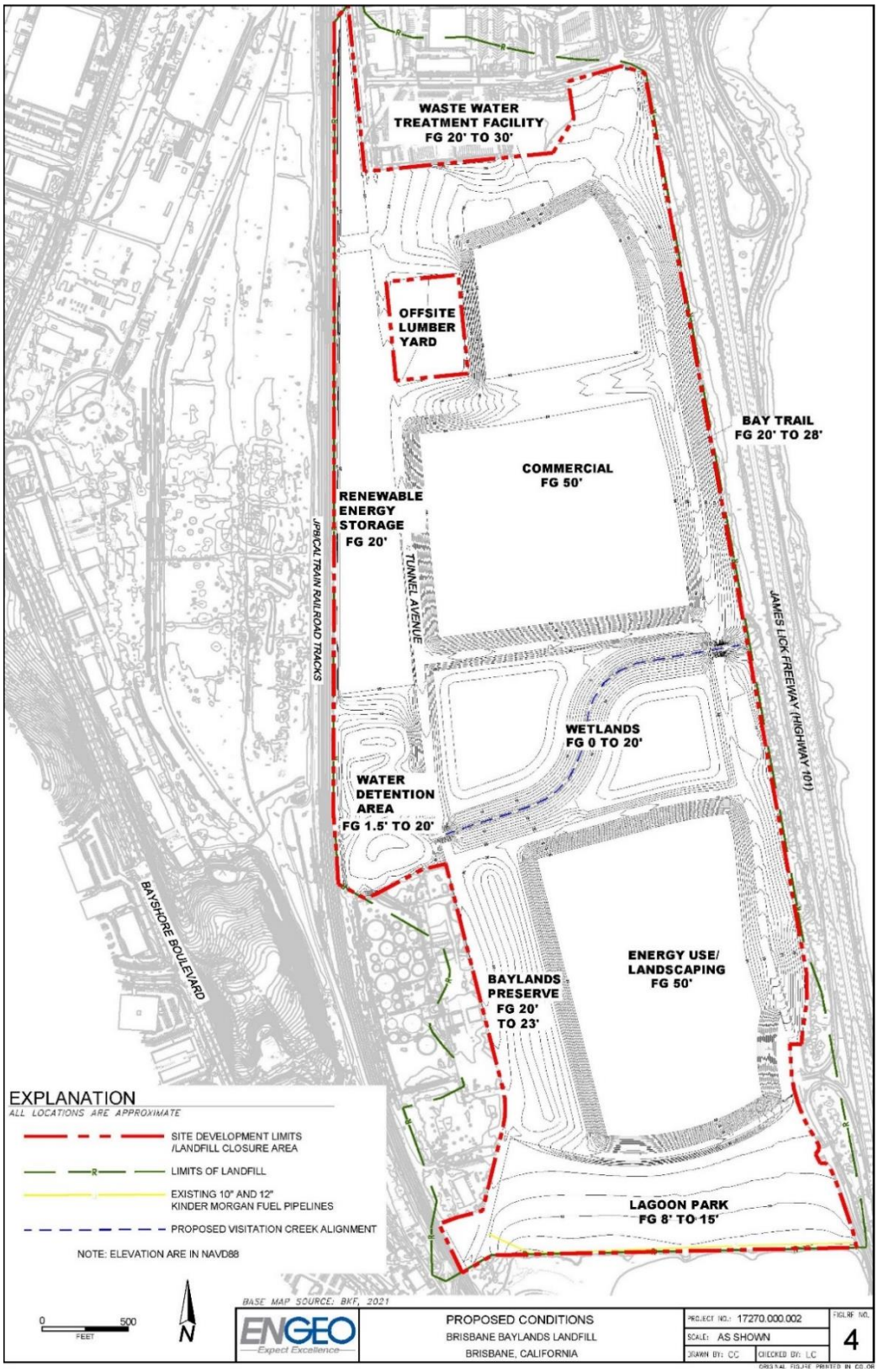
The maximum extent of the Brisbane Landfill that requires closure is approximately 364 acres. However, the Closure and Post-Closure Maintenance Plan applies only to the approximately 319-acre portion of the landfill owned by the Baylands landowner (see **Figure 2-12**), excluding areas of the lumber yard and portions of the land currently under the ownership and control of others. Subsequent to approval of the San Francisco Bay RWQCB, the Landfill Closure Plan could be amended to include additional portions of the landfill. **Figure 2-13** illustrates proposed Specific Plan lands uses overlying the landfill.

The goal of the Closure and Post-Closure Maintenance Plan is to appropriately close, mitigate, and manage the landfill so that it does not pose an unacceptable risk to human health and the environment and supports the intended development land uses. The primary components of the landfill closure will include decommissioning of existing systems, an engineered cap, leachate collection system, landfill gas collection, geotechnical stabilization, and a long-term monitoring and maintenance program, described in more detail below (ENGEO 2022).

Figure 2-12: Landfill Closure Plan Boundary

SOURCE: ENGEO, 2022

Figure 2-13: Proposed Development Overlying the Former Brisbane Landfill



SOURCE: ENGEO, 2022

Closure activities will commence following the removal of stockpiled soil for reuse in the western portion of the Baylands under a Soil Management Plan to be approved by the RWQCB.

All such reuse soil will meet applicable import criteria specified in Appendix H of the Closure and Post-Closure Maintenance Plan.

The applicant anticipates the landfill closure to be completed within approximately 10 years from the date when soil is first removed. Landfill closure will commence with initial preparation of the site, including removal of existing soil stockpiles, followed by implementation of geotechnical site mitigation.

Geotechnical improvements for each phase of work will follow the following sequence:

1. Earthwork site preparation
2. Installation of wick drains
3. Performance of deep dynamic compaction
4. Placement of civil fill, landfill cover, and surcharge fill
5. Removal of surcharge fill
6. Movement of excess surcharge fill to next phase

After geotechnical mitigation is complete, the landfill cover and control systems are proposed to be constructed with mass grading in sequence with Specific Plan phasing. Following the implementation of the landfill cover and control systems (i.e., compliance with Section 21090 of CCR Title 27) for each completed development area, or part thereof, closure will be sought for that area.

Decommissioning of Environmental Control Systems

Structures, including the existing leachate management and landfill gas extraction systems, will be demolished prior to site grading or prior to or during decommissioning of environmental control systems. The transition of operations from the existing systems to the new systems required under the Landfill Closure Plan is discussed below.

Final Landfill Cover

Future development that will require capping include:

- Commercial buildings
- Impervious pavement
- Vegetated landscaped areas
- Utilities

- Solar array fields
- Wetlands and open space.

The landfill cover will terminate north of an existing Kinder Morgan pipeline, along with the leachate management system barrier. A buffer of 20 feet will be maintained to minimize construction impacts on the pipeline.

The Title 27 Landfill Closure Plan states that soil improvements and construction techniques to support the buried Kinder Morgan pipes will be implemented to mitigate potential impacts during landfill closure and construction of the shoreline improvements and could include relocating the pipeline to the north of its existing location.

The various layers of the final landfill cover are described below from the bottom up.

Foundation Layer

In accordance with Title 27 requirements, the foundation layer may consist of soil, contaminated soil, incinerator ash, or other waste materials, provided that such materials have appropriate engineering properties to be used for a foundation layer. The foundation layer must be a minimum of 2 feet over the last lift of waste with appropriate engineering properties to provide low permeability. The existing cover soil may require stripping, scarification, and re-compaction to obtain strength and compressibility in accordance with geotechnical recommendations.

Low-Hydraulic-Conductivity Layer

Prior to installation of the low-hydraulic-conductivity layer, the upper 6 inches of the minimum 2-foot soil existing foundation layer material would be scarified, moisture conditioned, and compacted in accordance with the Landfill Closure Geotechnical Report (Appendix K.3). All low-hydraulic-conductivity layer alternatives must be placed at a minimum of a 2 percent slope to mitigate drainage above the cap. The low-hydraulic-conductivity layer elevation will vary across the landfill depending on proposed utility and building foundation penetrations. Utilities will likely remain mostly above the low-hydraulic-conductivity layer where possible. Transitional areas between different low-hydraulic-conductivity layer alternatives will require a minimum of 3 feet of overlap.

Different alternatives for the low-hydraulic-conductivity layer may be implemented for each of the future development areas (see Closure and Post-Closure Maintenance Plan, Appendix K.3 for more details). The primary engineered cap across the landfill site will include a geosynthetic liner, a compacted clay liner or geomembrane, compliant with Title 27 requirements. Low-permeability pavement for hardscaped areas will be used in the commercial areas, outside of building footprints. A multi-layer geosynthetic liner will be placed beneath Visitacion Creek and the surrounding restored wetlands, as an additional preventative measure for leachate seeps into overlying wetlands.

Drainage Layer

A drainage layer will be placed on top of the low-hydraulic-conductivity layer. This drainage layer will facilitate drainage of water infiltrating from above the final cover and convey it to wetland areas or drainage facilities. This may consist of a drainage geocomposite or granular material (e.g., crushed rock or gravel). Drainage piping may be necessary to collect and drain infiltrated water. The final construction drawings and specifications to be approved by state regulatory authorities will show the final material selection, final cover grading, the location of the drainage layer based on final design details, and drainage pipes.

Erosion-Resistant Layer

Engineered fill consisting of primarily on-site material will be placed above the low-hydraulic-conductivity and drainage layers at varying thicknesses greater than 1 foot. This erosion-resistant layer will accommodate appropriate root depths, utilities, and shallow foundations where possible. A stormwater drainage system will be installed on top or within this layer for runoff from impervious portions of the landfill. All irrigated portions of the landfill are required to contain a subdrain beneath the vegetative layer of the final cover.

Leachate Management System

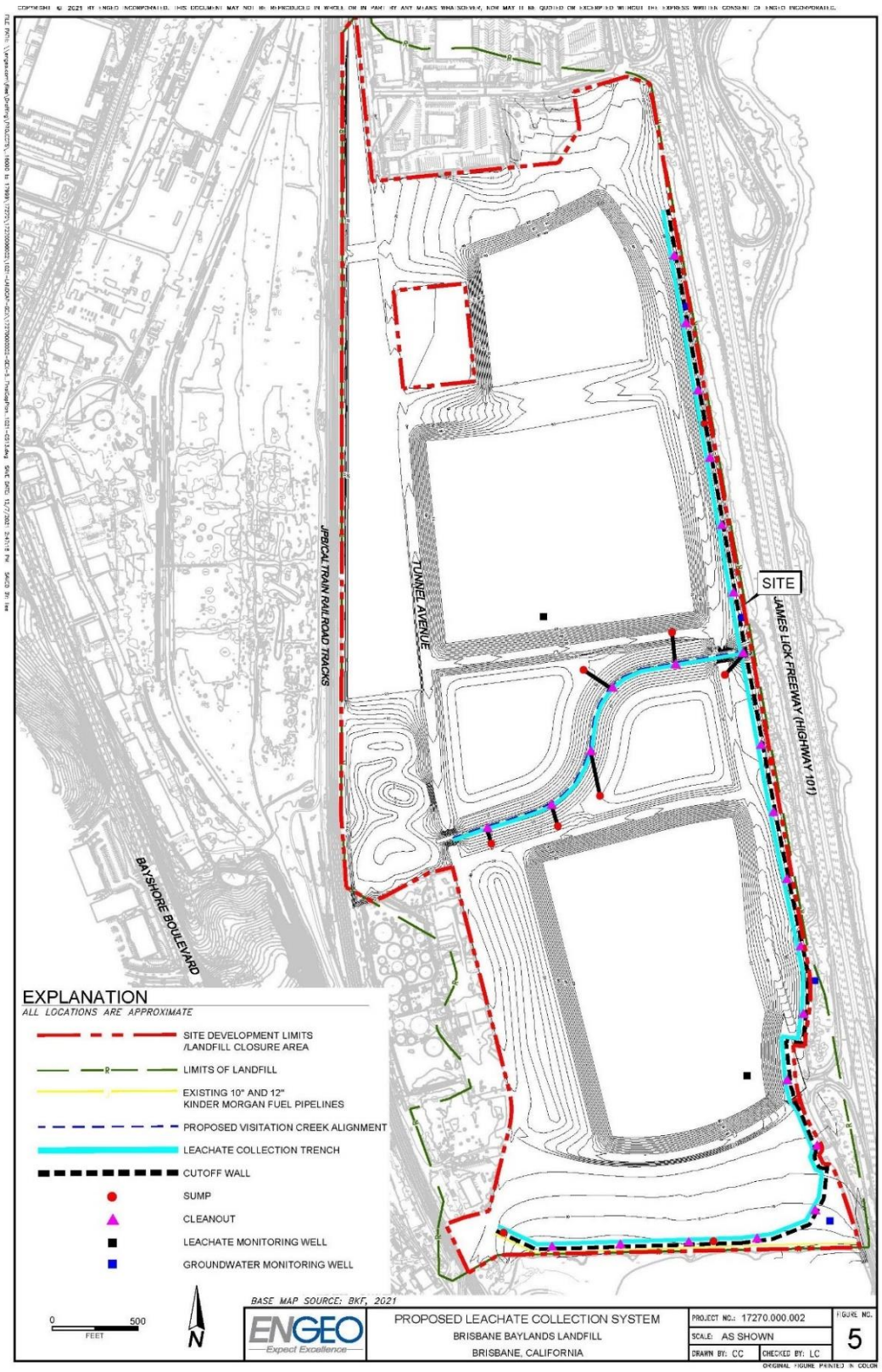
The existing leachate management system limits seepage of leachate along a portion of the southern boundary, reducing leachate entering the Brisbane Lagoon. A more robust leachate management system is required to be installed to prevent leachate migration off the landfill site following landfill closure. Because landfill closure and subsequent proposed development is proposed to occur in phases, the existing leachate management system will remain in place until the southern portion of the landfill is closed, at which time:

- Existing leachate management system components will be demolished;
- The pumps will be removed from the extraction wells and the compressor and air lines will be decommissioned; and
- The five extraction wells and four piezometers located along the Brisbane Lagoon will be abandoned under permit, in accordance with San Mateo County requirements.

The existing system will continue to be operated until either the seeps in that area can be eliminated with grading or the new leachate system is installed.

A leachate collection and removal system collection trench will be installed with a low-permeability cut-off wall. As shown in **Figure 2-14**, the future leachate collection and removal system will extend across most of the eastern and southern landfill boundaries. Additionally, the alignment of leachate collection system components will be designed to reduce static water pressure under the landfill cap.

Figure 2-14: Proposed Leachate Collection System



SOURCE: ENGEO, 2022

A low-permeability cut-off wall and leachate collection and removal system trench is proposed to work in concert to minimize off-site migration through restricting lateral movement and by continuously collecting, removing, and conveying leachate to the Bayshore Sanitary District (BSD) sewer line. The cut-off wall would extend from the landfill cover to the top of the Young Bay Mud layer. Additional details on the specific components of the leachate collection and removal system can be found in the Closure and Post-Closure Maintenance Plan (Appendix K.3).

Landfill Gas Collection and Control System

A new landfill gas management system will be installed during site grading, and temporary piping will be used to maintain operation of the existing system during the transition period (to the extent practicable).

During closure and future Specific Plan development, the existing landfill gas extraction system will continue to operate in accordance with Section 20920 of Title 27 and BAAQMD permit, whenever possible. Because landfill closure and Specific Plan development will take place in phases, the existing landfill gas system will be modified to allow for the continuous operation and eventual transfer of operation to the new system. Existing horizontal extraction wells will be abandoned in place or removed during the grading and deep dynamic compaction efforts. These wells will first be isolated from the rest of the system. **Figure 2-15** shows the existing and proposed landfill gas system. Based on the need for ground improvement (e.g., deep dynamic compaction, surcharge program) and the expected site settlement, the proposed landfill gas system will consist of vertical extraction wells only.

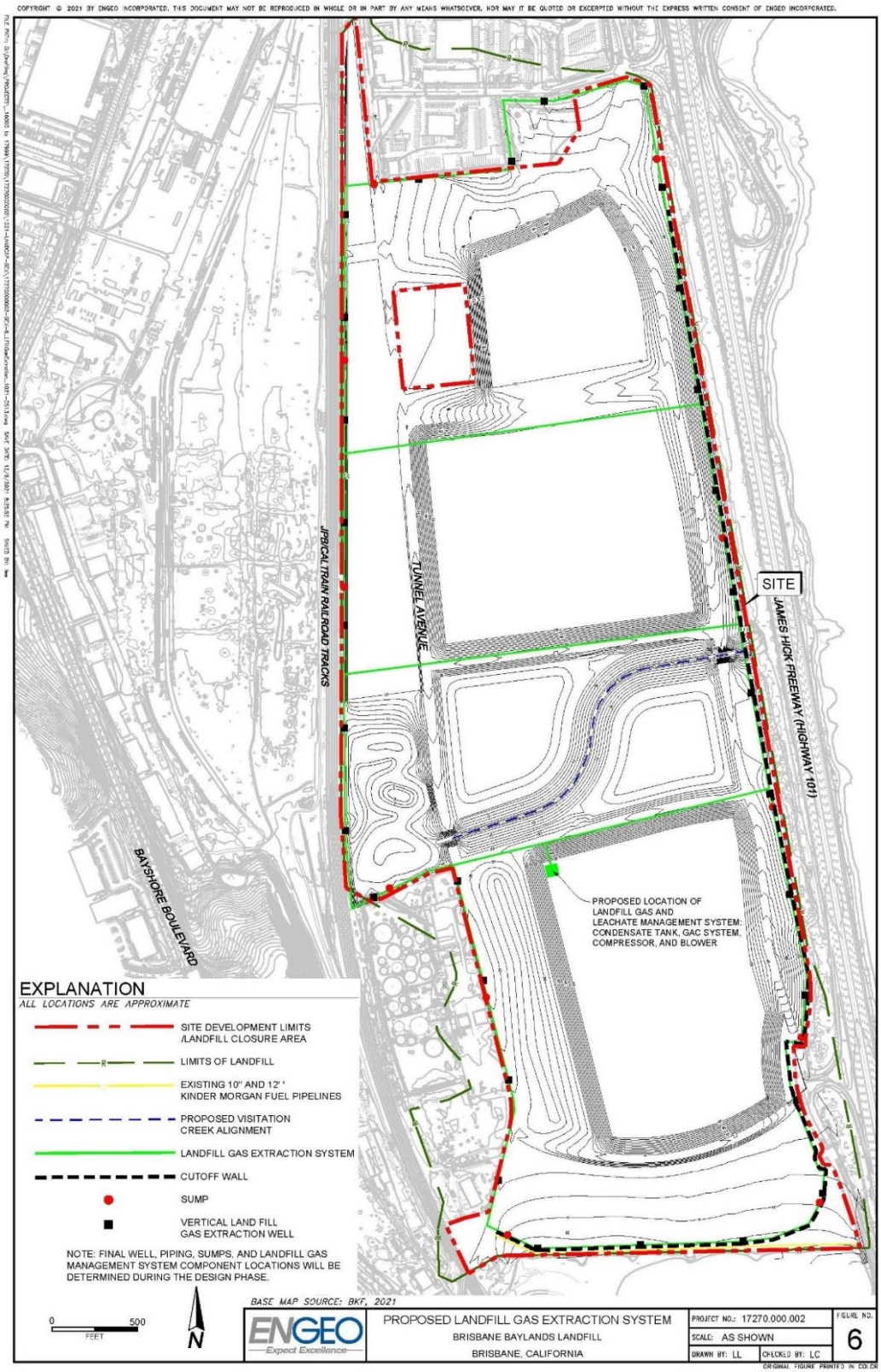
The existing landfill gas management system uses a flare station to combust the extracted gases. Based on the low landfill gas production rates that have been observed at the landfill in recent years, transition to a granular activated carbon system is anticipated.

Vertical landfill gas extraction wells will need to be installed through the proposed clay landfill cap. As a result, construction of a robust annular seal will be accomplished via hydrated bentonite and/or cement grout installed at depths corresponding to the final cover design elevation. The proposed lateral collection piping will be placed above the final landfill cover layer (wherever possible), to facilitate maintenance and sampling without disturbing the barrier layer.

Groundwater Monitoring Wells

Many of the groundwater monitoring wells within the landfill footprint will be removed under state regulatory oversight. Four perimeter wells will be installed along the perimeter of the landfill, downgradient of the leachate collection system, with two wells along the eastern boundary and two along the southern boundary. Wells will be installed to a sufficient depth to monitor shallow groundwater conditions and will be monitored semi-annually to ensure the leachate collection system is performing. However, well monitoring may move to a less than semi-annual basis once post-closure conditions have been established.

Figure 2-15: Landfill Gas Extraction System



SOURCE: ENGEO, 2022

Landfill Gas Intrusion Mitigation System

A landfill gas intrusion mitigation system consisting of a vapor barrier and a gas venting system layer will underlay commercial building footprints. The general conceptual design for the landfill gas intrusion mitigation system is included in the Closure and Post-Closure Maintenance Plan (see Appendix K.3). Methane detection alarms will be implemented throughout the buildings. If necessary, the venting system will be designed so that it can be converted and operated as an active venting system to more systematically extract and release sub-slab gas to the atmosphere if methane is detected within indoor air.

Construction Quality Assurance Plan

In accordance with Title 27 requirements, a Construction Quality Assurance Plan is required for construction and any repairs of the low-hydraulic-conductivity layer. Prior to initiating final landfill closure activities, a Construction Quality Assurance Plan is required to be prepared by a registered Civil Engineer or Certified Engineering Geologist for review and approval by the RWQCB and San Mateo County Environmental Health Services Division. The Construction Quality Assurance Plan will include the following elements:

- Final construction drawings and technical specifications.
- Procedures to be implemented during final cover and collection systems construction.
- Testing for quality assurance of constructed final cover and collection system component.
- Designated construction quality assurance officer in charge of observing installation of work, evaluating materials for conformance with plans and specifications, and testing.
- Daily recordkeeping and reporting of inspections and construction activities.

Final Landfill Cap and Certification of Closure and Recording

Title 27 requirements and the Waste Discharge Requirements require a minimum of two surveyed permanent monuments near the landfill from which the location and elevation of waste, containment structures, and monitoring facilities can be determined throughout the post-closure maintenance period. Upon construction of these monuments, a certification of closure will be prepared by a professional civil engineer or certified engineering geologist and submitted to the RWQCB, CalRecycle, and the Local Enforcement Agency (LEA) for approval.

Monitoring, Inspections, and Reporting

The final Landfill Closure Plan includes inspection and reporting requirements for each of the main components of the closure plan including the final cover, leachate management system, landfill gas collection and control system, stormwater control systems, groundwater and leachate monitoring wells, and building landfill gas intrusion mitigation systems. Additional

inspections will be completed in the event of a catastrophic occurrence such as an earthquake, flood or major storm event, fire, or damage sustained by high winds, facility, or vehicular accidents.

Indoor Continuous Methane Monitoring

The Landfill Closure Plan also includes requirements for indoor continuous methane monitoring. Section 20921 of CCR Title 27 requires landfill gas controls to maintain the following conditions:

- Periodic methane gas monitoring shall be conducted inside all buildings and underground utilities.
- Methane gas concentrations shall not exceed 1.25 percent volume in air within on-site structures.
- Concentrations of methane gas migrating from the landfill property shall not exceed 5 percent by volume in air at the facility property boundary.
- Trace gases shall be controlled to prevent adverse acute and chronic exposure to toxic and/or carcinogenic compounds.
- Automatic methane gas sensors shall be installed within the permeable gas layer within building footprints, and inside the building to trigger an audible alarm when methane gas concentrations are detected (ENGEO 2022).

A continuous methane monitoring system will be implemented within the buildings to ensure that there is no hazard due to the accumulation of levels of landfill methane gas above 5,000 parts per million by volume (ppmv). This goal is accomplished by using workspace sensors, which will be set to sound an audible and visual alarm at 20 percent of the lower explosive limit of methane gas (10,000 ppmv). A system inspection, maintenance, calibration, and sampling will be performed on a quarterly basis for each building within the landfill footprint. Testing and calibration will be performed in accordance with the manufacturer specifications for the selected methane detection system on at least a semi-annual basis.

Security

Site security is required to be implemented to ensure care and prevent public access to the leachate collection system and landfill gas extraction system components. Security fencing, access gates, and signs will be installed around major system components such as the landfill gas management station.

ISO-Settlement Maps/Tracking Differential Settlement

A geotechnical ground improvement program will be implemented as part of the landfill closure activities to reduce post-construction settlement of the soil. As part of the ground improvement program, regular monitoring of settlement will be performed to evaluate the efficacy of the ground improvement technique and provide information to estimate future post-construction settlement. The frequency of settlement monitoring throughout grading construction will be performed bi-weekly for the first 3 months after the surcharge height has been reached and then monthly for the subsequent 3 to 6 months, depending on settlement progress. The initial survey and map will be used as a baseline condition for the landfill at closure.

In accordance with Title 27 requirements, an iso-settlement map will be produced at least every 5 years to depict the estimated total change in elevation at each portion of the final cover's low-hydraulic-conductivity layer. Prior to conducting periodic grading operations, the contractor will note on a map the approximate location and outline of areas where differential settlement is visually obvious. As part of post-closure maintenance, inspections will be performed to record areas where differential settlement is observed. Areas of differential settlement that affect the final cover integrity will require repair in accordance with the Landfill Closure Plan.

Completion of Post-Closure Maintenance Period

As stated in Title 27 Section 21900(a), "The operator of a solid waste landfill may be released from post-closure, after a minimum period of thirty (30) years upon demonstration to and approval by CalRecycle, the Local Enforcement Agency, and the RWQCB that the solid waste landfill no longer poses a threat to the public health and safety and the environment." The Brisbane Landfill stopped receiving waste in 1967 and has implemented landfill gas, leachate, and landfill cover controls, but not under a formal Closure and Post-Closure Maintenance Plan. The ongoing need for the leachate management system, landfill gas collection and control system, and groundwater and leachate monitoring may be reevaluated after the first year of operation.

2.6 CALIFORNIA HIGH SPEED RAIL LIGHT MAINTENANCE FACILITY WITHIN THE BAYLANDS

The California High-Speed Rail Authority (Authority) completed a Final Environmental Impact Report/Environmental Impact Statement and approved the San Francisco to San Jose segment of the state-wide high-speed rail system in 2022. Included along this segment was a light maintenance facility (LMF) that would be constructed and operated on approximately 121 acres of the Baylands Specific Plan area, east of the Caltrain right-of-way.

In September 2024, the Authority and the City of Brisbane reached an agreement wherein the Authority would pursue a smaller (approximately 45-acre) LMF within the eastern portion of the Baylands once preparation of updated environmental documentation was completed.[45]

As the result of a September 2024 agreement between the City of Brisbane and the California High-Speed Rail Authority, an alternative is analyzed in Chapter 8, wherein Tunnel Avenue would be realigned to the east, providing a 45-acre site within which the Authority would develop a 45-acre LMF (see **Figure 2-16**). While the impacts of Baylands development around an operating 45-acre LMF are addressed in Chapter 8, impacts associated with LMF construction and operation would be the responsibility of the Authority. In addition, the analysis of cumulative environmental effects of Baylands development in combination with other past, present, and reasonably foreseeable future projects in Chapter 7, *Cumulative Environmental Effects*, includes a 45-acre LMF as a reasonably foreseeable future project.

2.7 PROJECTED SEA LEVEL RISE

At the time the Specific Plan was being developed, the 2018 State of California Sea Level Rise Guidance[46] (Sea Level Rise Guidance), developed by the Ocean Protection Council (OPC), provided a framework for state agencies and local governments to factor sea level rise impacts into planning decisions. The Sea Level Rise Guidance summarizes the best available science on sea level rise and encourages agencies to select a sea level rise projection for planning purposes based on multiple factors, such as the location of a facility, its expected lifespan, sea level rise exposure and associated impacts, adaptive capacity, and risk tolerance/aversion. California updated its sea level rise planning guidance[47] in 2024 (OPC 2024). Therefore, as discussed below, sea level rise is analyzed in this EIR based on the updated 2024 guidance. The Sea Level Rise Guidance is expected to continue being revised about every 5 years.

[45] The September 2024 agreement can be found at: https://www.brisbaneca.org/city-attorney/page/california-high-speed-rail-authority-and-city-brisbane-reach-settlement.

[46] Ocean Protection Council. 2018. State of California Sea-Level Guidance.

[47] Ocean Protection Council. 2024. State of California Sea-Level Guidance: 2024 Science & Policy Update.

Figure 2-16: Location of a 45-Acre High-Speed Rail Light Maintenance Facility in Relation to the Baylands Specific Plan Land Use Plan

Because future GHG emissions depend on future actions that are not yet known, and because the climate response to these emissions is not precisely known, the sea level rise scenario that will occur cannot be precisely known at this time. To accommodate this uncertainty, the OPC (OPC 2018, 2024) recommends considering a range of scenarios for climate change adaptation planning. OPC (2018) recommends using the low risk aversion scenario for open space, such as along Visitacion Creek and Brisbane Lagoon. They also recommend using the medium-high risk aversion scenario for occupied residential and commercial buildings, such as proposed for much of the Specific Plan area. For OPC (2024), the derivation and terminology of the sea level rise scenarios was modified to be consistent with those in the nationwide update (Sweet et al., 2022[48]). The 2024 scenario recommended for open space, corresponding to low risk aversion, is the Intermediate Scenario. The 2024 scenario recommended for residential and commercial buildings with lifespan to 2075 and beyond is the Intermediate-High Scenario. The 2024 scenario recommended for critical infrastructure (such as roads and landfills) and for lifespans beyond 2100 is the High Scenario. **Table 2-2** compares the sea level rise projections from OPC (2018) and OPC (2024) for Year 2050 and Year 2100. All of these projections are relative to sea level in Year 2000. For this report, the bracketing OPC (2024) Intermediate Scenario of 3.1 feet and the High Scenario of 6.5 feet is considered reasonably foreseeable and used to assess the Specific Plan.

Table 2-2: Sea Level Rise Projections, in Feet

	OPC 2018 Guidance		OPC 2024 Guidance Scenarios		
	Low Risk Aversion	**Medium-High Risk Aversion**	**Intermediate**	**Intermediate-High**	**High**
	Likely Range 66% probability sea level rise is …	*1-in-200 Chance 0.5% probability sea level rise meets or exceeds …*	*5% exceedance probability for 3°C warming*	*0.1% exceedance probability for 3°C warming*	*<0.1% exceedance probability for 3°C warming*
	To Be Applied to:		*To Be Applied to:*		
	Open space	*Residential & commercial buildings*	*Open space*	*Residential & commercial buildings, lifespan beyond 2075*	*Critical infrastructure, lifespan beyond 2100*
2050	1.1	1.9	0.8	1.0	1.3
2100	3.4	6.9	3.1	4.8	6.5

SOURCE: OPC 2018 (high emissions scenario), OPC 2024 (for San Francisco)

Following this guidance, the Specific Plan's development area, including residential, commercial, and public facilities, are located outside of the area that would be subject to 6.5 feet

[48] Sweet, W.V., B.D. Hamlington, R.E. Kopp, C.P. Weaver, P.L. Barnard, D. Bekaert, W. Brooks, M. Craghan, G. Dusek, T. Frederikse, G. Garner, A.S. Genz, J.P. Krasting, E. Larour, D. Marcy, J.J. Marra, J. Obeysekera, M. Osler, M. Pendleton, D. Roman, L. Schmied, W. Veatch, K.D. White, and C. Zuzak. 2022. Global and Regional Sea Level Rise Scenarios for the United States: Updated Mean Projections and Extreme Water Level Probabilities Along U.S. Coastlines. NOAA Technical Report NOS 01. National Oceanic and Atmospheric Administration, National Ocean Service, Silver Spring, MD, 111 pp. https://oceanservice.noaa.gov/hazards/sealevelrise/noaa-nos-techrpt01-global-regional-SLR-scenarios-US.pdf.

of sea level rise. The Specific Plan also designs areas along Visitacion Creek and Brisbane Lagoon based on 3.1 feet of sea level rise.

2.8 BAY-DELTA PLAN AMENDMENT

2.8.1 BAY-DELTA PLAN

The San Francisco/Sacramento-San Joaquin Delta Estuary (Bay-Delta) is an important estuary that provides an essential water source for major users to the south and west. As competition over water supply between in-basin and export users grew, in 1978, the State Water Resources Control Board (SWRCB) adopted the Bay-Delta Plan to establish water quality objectives for designated beneficial uses of water in the Bay-Delta watershed and an implementation program to meet those objectives. State Board regulations and decisions can affect the availability of water for Bay-Delta exporters, including State Water Project (SWP) contractors like SFPUC. Currently, many of the Bay-Delta Plan's water quality objectives are achieved through flow requirements; the SWP and Central Valley Project (CVP) are the main sources of these flows. The Bay-Delta Plan was amended in 1991 and 1995, with minor changes in 2006.

In December 2018, the SWRCB adopted amendments related to lower San Joaquin River flows and southern Delta salinity—the first phase of the Bay-Delta Plan update. Some of the flow objectives would be implemented by requiring the maintenance of unimpaired flows in the winter and spring.[49] The new requirements are estimated to result in a 12 to 16 percent average reduction in surface water diversions. The SWRCB is also developing Bay-Delta Plan updates for the Sacramento River and Delta eastside tributaries, as well as Delta outflows and interior flows, in a second phase based on a July 2018 framework.

If implemented, the Bay-Delta Plan Amendment could significantly reduce water available from the Tuolumne River, which is the source of 85% of the water for the SFPUC's regional water system.

Following the SWRCB's adoption of the Bay-Delta Plan Amendment, there were over a dozen active lawsuits challenging the Bay-Delta Plan Amendment given its potential to significantly reduce water supply available to the Bay Area. However, in March 2024, the Sacramento County Superior Court ruled in the SWRCB's favor on all claims. In May 2024, the City and County of San Francisco and other water suppliers filed an appeal on this decision.

Since 2019, SFPUC has participated in negotiations with the state and other stakeholders to reach a compromise wherein a voluntary agreement could be adopted as an alternative or substitute for the Bay-Delta Plan Amendment that would minimize the impacts to the Regional Water System. In March 2019, SFPUC submitted a proposed voluntary agreement (Proposed

[49] Unimpaired flow is defined as the natural water production of a river basin without any upstream diversions, storage, exports, or imports.

Voluntary Agreement) to the state, and a non-binding memorandum of understanding (MOU) was signed between SFPUC and state representatives outlining conceptual deal points for a Tuolumne River Voluntary Agreement, described in further detail in Section 6.1.1.2 of the Baylands Water Supply Assessment (Appendix P). As of January 2025, the MOU remains in effect, while the Proposed Voluntary Agreement is currently undergoing review and evaluation by the SWRCB (SFPUC 2023b; BAWSCA 2024b).

Given the ongoing negotiations, litigation, and regulatory proceedings surrounding the Bay-Delta Plan Amendment, the SFPUC uses three scenarios to analyze water supply and demand in its Water Supply Assessments to account for the uncertainty regarding the extent and timing of the Bay-Delta Plan Amendment's implementation. Based on this and additional information provided by the Bay Area Water Supply and Conservation Agency (BAWSCA), the Baylands Water Supply Assessments analyze water supply and demands through 2045 under the three scenarios recommended by SFPUC:

- Scenario 1: Implementation of the Bay-Delta Plan Amendment
- Scenario 2: Without implementation of the Bay-Delta Plan Amendment or the Proposed Voluntary Agreement
- Scenario 3: Implementation of the Proposed Voluntary Agreement

These scenarios account for the uncertainty regarding the extent and timing of the Bay-Delta Plan Amendment's implementation. As such, these three scenarios were evaluated in the water supply assessment to analyze water supply and demands through 2045.

Scenario 1 represents "worst-case" supply scenario in which the Bay-Delta Plan Amendment is implemented as adopted without accounting for implementation of actions identified as part of the Settlement Agreement, SFPUC's Alternative Water Supply Planning Program (AWSP), BAWSCA's 2015 Strategy, or Cal Water's Bay Area Regional Water Supply Reliability Study (WSRS). Under this scenario, shortfalls of up to 53% are projected during drought years.

A significant source of uncertainty identified in the Water Supply Assessment was whether the Water Quality Control Plan for the Bay-Delta Plan Amendment will be implemented and how it would affect the supply reliability of the City and County of San Francisco's Regional Water System, which is Cal Water's major source of supply. However, as described in the Water Supply Assessment, Cal Water expects that SFPUC's level of service goals will be met and assumes its contract with SFPUC will be honored as written. If drought conditions should arise, Cal Water would meet its demands through the implementation of its Water Shortage Contingency Plan, as described in detail in the water supply assessment (Appendix P). Recycled water supply from the Baylands water recycling facility would reduce potable water supply shortfalls relative to total demands during normal year, single dry year, and multiple dry year hydrologic scenarios by eliminating use of potable water for non-potable purposes within the

Baylands, as quantified in Appendix P. In addition, Cal Water, through local and regional efforts, is also striving to increase its water supply portfolio for the three Peninsula Districts.

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CHAPTER 3 PROJECT DESCRIPTION

The purpose of this chapter is to provide the public, reviewing agencies, and decision-makers with a description of the Baylands Specific Plan ("Specific Plan") along with the development it permits, related components, required approvals, and a description of how this EIR is intended to be used.

CEQA Guidelines Section 15124: Requirements for an EIR Project Description

"The description of the project shall contain the following information but should not supply extensive detail beyond that needed for evaluation and review of the environmental impact.

(a) The precise location and boundaries of the proposed project shall be shown on a detailed map, preferably topographic. The location of the project shall also appear on a regional map.

(b) A statement of the objectives sought by the proposed project. A clearly written statement of objectives will help the lead agency develop a reasonable range of alternatives to evaluate in the EIR and will aid the decision makers in preparing findings or a statement of overriding considerations, if necessary. The statement of objectives should include the underlying purpose of the project and may discuss the project benefits.

(c) A general description of the project's technical, economic, and environmental characteristics, considering the principal engineering proposals if any and supporting public service facilities.

(d) A statement briefly describing the intended uses of the EIR.

(1) This statement shall include, to the extent that the information is known to the Lead Agency,

(A) A list of the agencies that are expected to use the EIR in their decision making, and

(B) A list of permits and other approvals required to implement the project.

(C) A list of related environmental review and consultation requirements required by federal, state, or local laws, regulations, or policies. To the fullest extent possible, the lead agency should integrate CEQA review with these related environmental review and consultation requirements.

(2) If a public agency must make more than one decision on a project, all its decisions subject to CEQA should be listed, preferably in the order in which they will occur. On request, the Office of Planning and Research will provide assistance in identifying state permits for a project."

3.1 PROJECT LOCATION

The Baylands Specific Plan area ("Specific Plan area," "Baylands," "Baylands site," or "site") and the City of Brisbane lie within the nine-county San Francisco Bay area region in the northeastern corner of San Mateo County, immediately south of the City and County of San Francisco (see **Figure 3-1**). Municipalities adjoining Brisbane include San Francisco to the north, Daly City and an unincorporated portion of San Mateo County to the west, and South San Francisco to the south.

The US Highway 101 freeway ("US 101") forms the Baylands' eastern boundary and runs immediately adjacent to the west shore of San Francisco Bay, placing the Specific Plan area approximately 250 feet west of the Bay. San Bruno Mountain, whose slopes form the western edge of Brisbane, provides a dramatic backdrop to the City when it is viewed from the north and east.

The Baylands Specific Plan area is bounded to the east by US 101 and to the west and south by Bayshore Boulevard (see **Figure 3-2**). The site's northern boundary is formed by the San Francisco County line and the portion of the existing Recology waste management facilities that is within the City

of Brisbane. The Baylands includes approximately 680.1 acres (558.3 acres of existing land area and 121.8 acres of existing lagoon[50]).

Figure 3-1: Baylands Specific Plan Location

[50] Approximately 26 acres of existing land area within the Baylands is projected to be inundated on a daily basis as the result of projected sea level rise through the Year 2100. Thus, by the Year 2100, the Baylands Specific Plan area is projected to consist of 532.3 acres of land area and 147.8 acres of open water within the Brisbane Lagoon and Visitacion Creek.

Figure 3-2: Baylands Specific Plan Area

3.2 PROJECT OBJECTIVES

The following identifies the project objectives of the 2025 Baylands Specific Plan project, including its underlying purpose pursuant to California Environmental Quality Act (CEQA) Guidelines Section 15124(b), which requires an EIR to include a "statement of objectives sought by the proposed project" and "should include the underlying purpose of the project and may discuss the project benefits."

The **underlying purpose of the Baylands Specific Plan** and related project components is to provide for the productive reuse of this brownfield site in a manner that eliminates ongoing ecological damage and ensures the safety of all who will use the Baylands.

Project objectives for the Baylands are to:

- Implement the City's Housing Element by providing a mix of housing types, sizes, and densities that contributes to local and regional housing needs for all economic segments of the community, as well as for families and individuals of all ages and physical abilities.
- Implement the Brisbane General Plan, including General Plan Amendments GP-1-18 (Measure JJ) and GP-1-19.
- Preserve and enhance the site's natural resources and historic features within a system of permanent open space that:
    - Restores, and enhances wetlands and natural habitats within the Baylands;
    - Promotes visual connectivity between the Baylands, San Bruno Mountain, and San Francisco Bay;
    - Adapts to climate change and sea level rise; and
    - Provides a range of recreational opportunities and open space experiences for Baylands residents and workers, as well as for the larger Brisbane community.
- Enhance Brisbane's economic vitality by ensuring that Baylands development will be revenue positive for the City.
- Establish the Baylands as a leading model of sustainable development consistent with the principles of the City's Sustainability Framework for the Baylands (Integral Group 2015).
- Attract office-based employment to the Baylands that provides a broad range of high-paying jobs as well as training and advancement opportunities for the community's young adults.
- Enable residents, workers, and visitors to be less dependent on cars.

3.3 PROJECT TECHNICAL, ECONOMIC, AND ENVIRONMENTAL CHARACTERISTICS

The applicant, Sunquest Properties Inc. ("Sunquest") and its development manager, Baylands Development Inc. ("BDI"), collectively referred to as the "applicant," are proposing a Specific Plan for development of 2,200 dwelling units, 6.5 million square feet of commercial office development, and an additional 500,000 square feet of hotel use; resource conservation and outdoor recreational areas; acquisition of a water supply by establishing the California Water Service Company as the water service agency for the Baylands, Sierra Point, and Beatty subareas of the City of Brisbane; and construction of associated on-site and off-site infrastructure. To accomplish this development, the Baylands project consists of the six major components described below.

- Amendment of the General Plan Land Use and Circulation Elements.
- Baylands Specific Plan.
- Relocation of the existing North County Fire Authority Brisbane Fire Station No. 81, conversion of the existing station for use as a training facility, and establishment of a new station within the Baylands.
- Bayshore Mobility Plan.
- Construction of a Middle School within the Baylands and conversion of the existing Bayshore School to an Elementary School.
- Development Agreement.

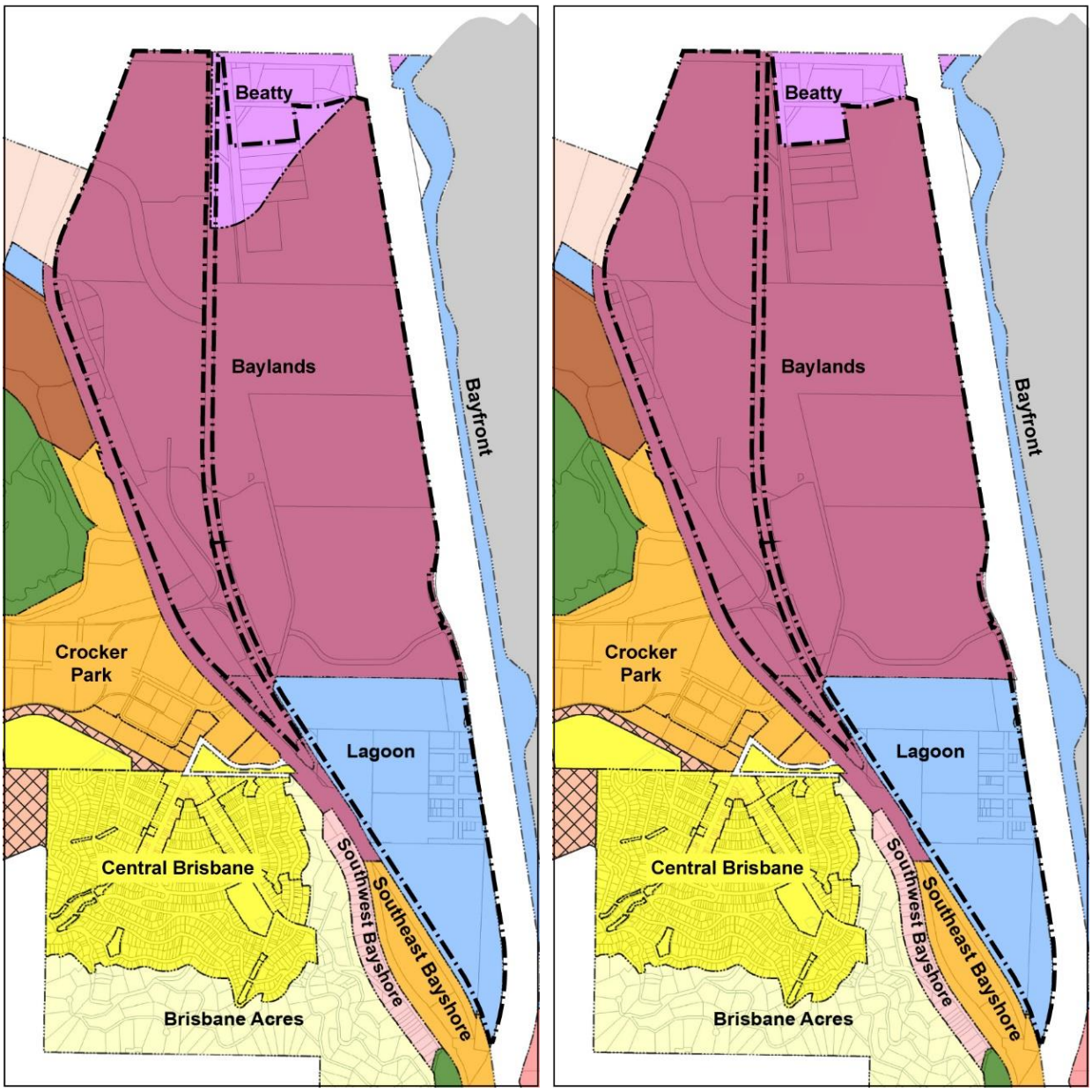
3.3.1 GENERAL PLAN AMENDMENT

Currently, the Baylands Specific Plan area encompasses the Baylands General Plan Subarea and a portion of the Beatty General Plan Subarea. An amendment to the Brisbane General Plan is proposed to modify the General Plan land use map to include the entirety of the Baylands Specific Plan and land owned by the applicant within the Baylands Subarea (see **Figures 3-1**, **3-2**, and **3-3**). The land use designation for the portion of the Baylands Specific Plan currently within the Beatty Subarea would be modified from Heavy Commercial to Baylands Planned Development, Residential Prohibited.

In addition, as shown in **Figure 3-4a** and **Figure 3-4b**, the Brisbane General Plan Circulation Element is proposed to be amended to:

- Realign Lagoon Road to directly access the southbound US 101 freeway ramps at Sierra Point Parkway;

Figure 3-3: Proposed General Plan Land Use Element Amendment



EXISTING PROPOSED

Figure 3-4a: Existing General Plan Circulation Element as Amended by GP-1-19 in January 2020

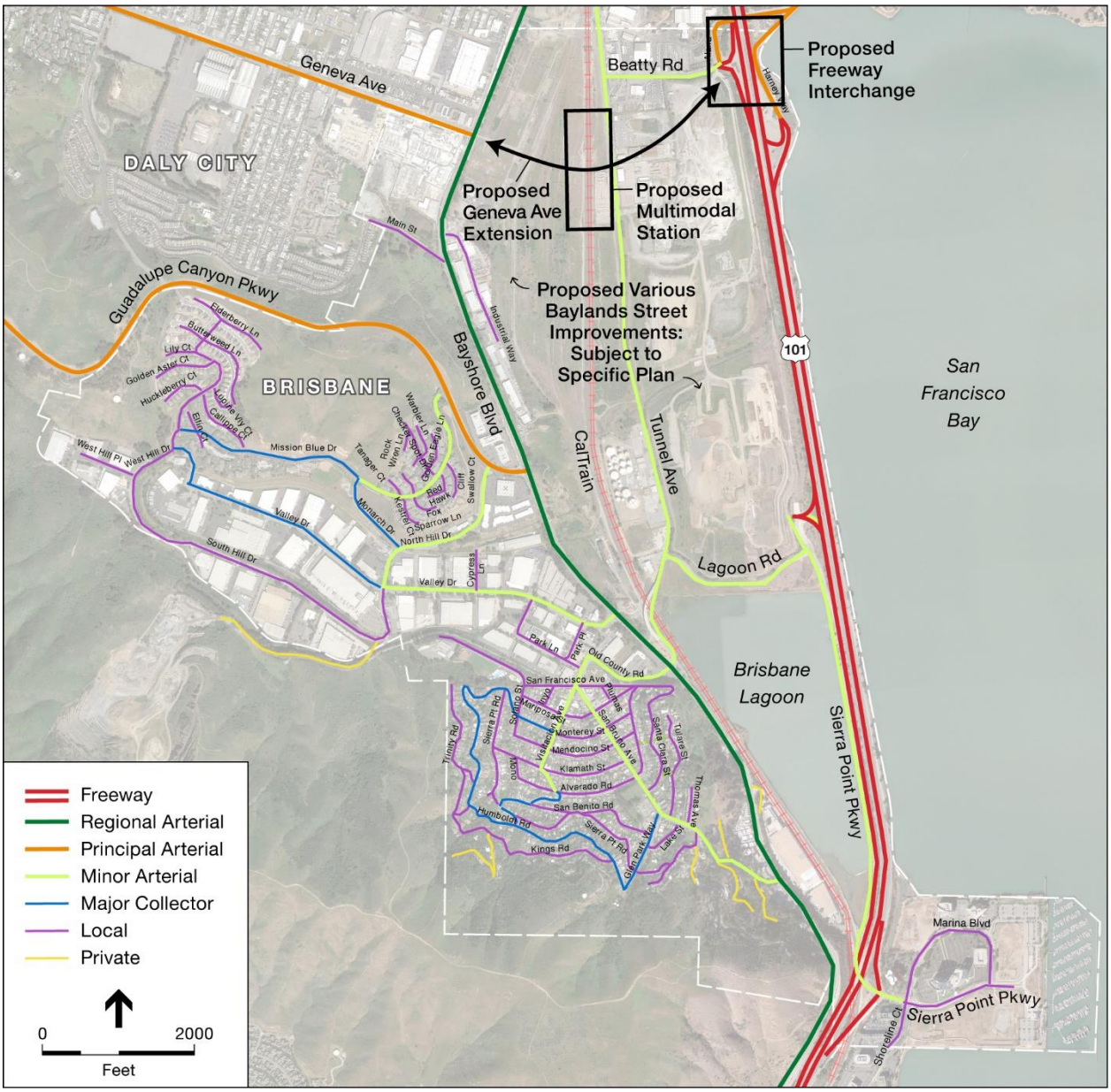
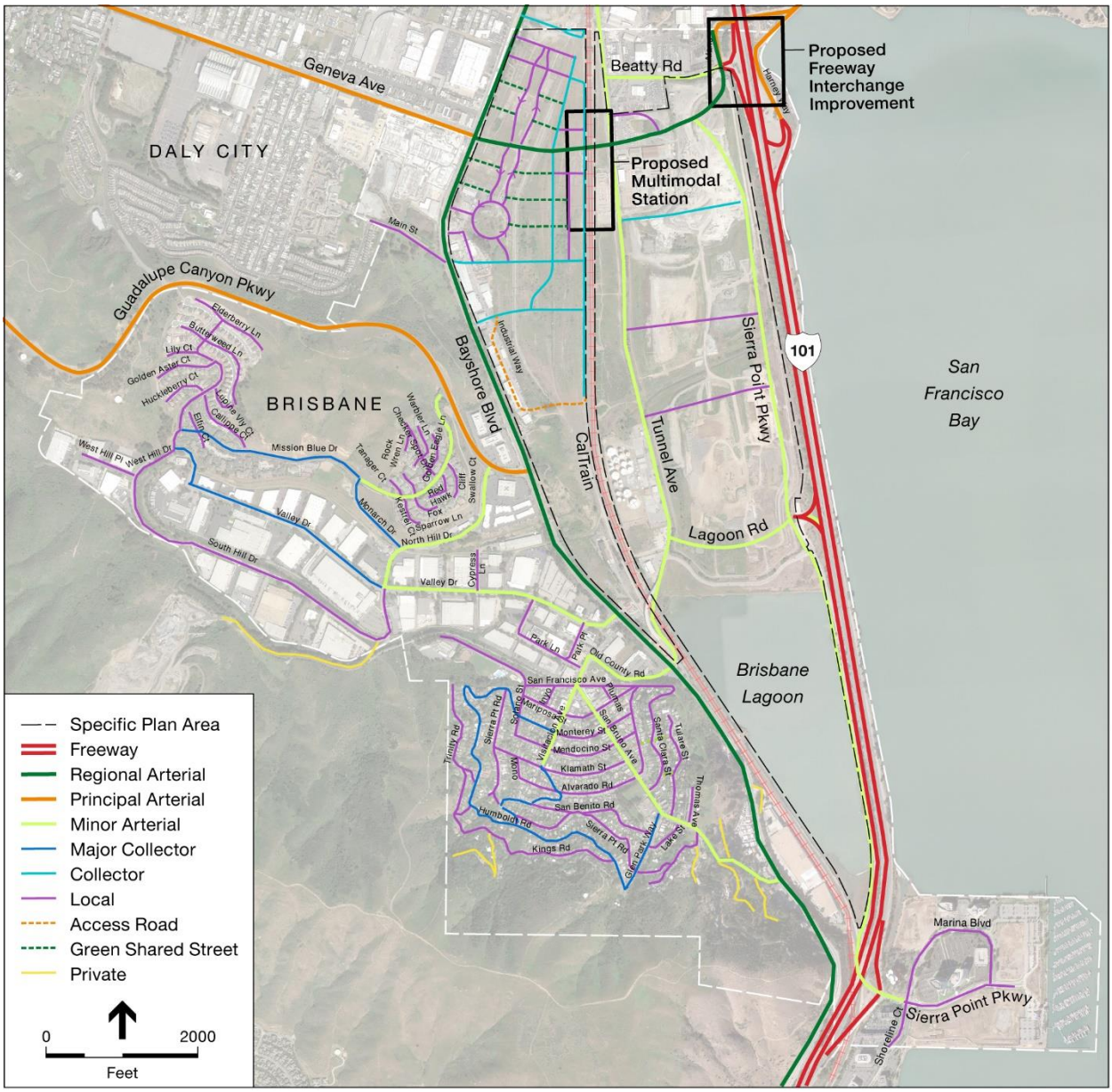


Figure 3-4b: General Plan Circulation Element as Proposed



NOTE: "Multimodal Station" refers to a possible future expansion of the existing Bayshore Caltrain Station to serve as a transfer point between Caltrain rail service and future bus rapid transit (BRT) service along Geneva Avenue, and the potential for southerly extension of Muni light-rail service, as well as with Baylands bicycle, pedestrian, and shuttle systems.

- Extend Sierra Point Parkway from its current terminus at the southbound US 101 freeway ramps north to Geneva Avenue;
- Add proposed Baylands roadways to the General Plan circulation map;
- Designate the Geneva Avenue extension through the Baylands as a Regional Arterial;
- Add "Green Shared Street" to the General Plan as a roadway type; and
- Abandon the Industrial Way right-of-way following removal of existing industrial buildings.

3.3.2 BAYLANDS SPECIFIC PLAN AND PROPOSED DEVELOPMENT

a. Purpose of a Specific Plan

A specific plan is a tool for the systematic implementation of a community's general plan. It is intended to provide for the orderly and efficient development of an area, covering land use and design requirements for private development, public services and facilities, and circulation and streetscape improvements in public areas.

The Baylands Specific Plan is therefore intended to implement the Brisbane General Plan by allowing site-specific development of residential, office, retail, and recreational uses within the Baylands over the next 20 years along with habitat restoration and enhancement. The Baylands Specific Plan will serve as the zoning for the Specific Plan area.

b. Contents of the Baylands Specific Plan

The Baylands Specific Plan includes a comprehensive plan for development of the 680.1-acre Baylands site, including goals, policies, and development standards and plans to guide future development actions. The Specific Plan also identifies necessary infrastructure and circulation improvements to accommodate proposed growth, and a strategy intended to ensure coordinated implementation.

The Specific Plan consists of the following chapters:

- **Vision and Executive Summary** provides an overview of the applicant's plan for the Baylands, including the guiding principles identified by the applicant that underlie the applicant's vision. This chapter also describes the applicant's planning and design process leading to preparation of the Specific Plan and its submittal to the City of Brisbane.
- **Introduction** describes the overall purpose of the Specific Plan and the legal requirements for a specific plan. This chapter describes the character of the Specific Plan area and its surroundings, land ownerships, and key factors that influence the Specific Plan's form and provisions.

- **Land Use Program and Definitions** describes the overall land use and development program for the Baylands, including land use goals and policies. This chapter also describes proposed land use and building types and the intensity of proposed development within the Baylands.
- **Development Standards and Controls** sets forth zoning and development standards at a district, block, and building level. This chapter also provides design guidelines for future development within the Baylands.
- **Sustainability Framework** describes strategies and standards for: creating "zero carbon buildings" and a "zero waste" development that conserves energy and water, increases transit accessibility and use of non-motorized transportation modes, enhances habitats and the site's natural environment, establishes resiliency in light of projected sea level rise adaptation, provides for sustainable infrastructure development, and addresses other sustainability factors.
- **Conservation and Open Space** describes the Baylands proposed open space/open area[51] program, including habitat conservation, restoration, and enhancement, as well as active and passive parks and recreational improvements. This chapter also

California Government Code: Specific Plan Content Requirements

Government Code Section 65451 sets forth the following requirements for specific plans:

(a) A specific plan shall include a text and a diagram or diagrams, which specify all of the following in detail:
  (1) The distribution, location, and extent of the uses of land, including open space, within the area covered by the plan.
  (2) The proposed distribution, location, and extent and intensity of major components of public and private transportation, sewage, water, drainage, solid waste disposal, energy, and other essential facilities proposed to be located within the area covered by the plan and needed to support the land uses described in the plan.
  (3) Standards and criteria by which development will proceed, and standards for the conservation, development, and utilization of natural resources, where applicable.
  (4) A program of implementation measures including regulations, programs, public works projects, and financing measures necessary to carry out paragraphs (1), (2), and (3).

(b) The specific plan shall include a statement of the relationship of the specific plan to the general plan.

Government Code Section 65452 states that a specific plan "may address any other subjects which in the judgment of the planning agency are necessary or desirable for implementation of the general plan."

[51] *Open Space*, as used in this EIR, refers to lands the Specific Plan designates for parks and recreation facilities that would be available to the public along with lands designated for the preservation or enhancement of biological resources.

Open Area, as described in the Brisbane General Plan Land Use Element, consists of land, primarily in private ownership, which serves to soften the impacts of urban development by providing primarily green areas and a feeling of "openness" to the overall development pattern. Open areas include, but are not limited to, setbacks and easements that are landscaped or characterized by native vegetation, gardens, and landscaped vegetation. Open areas might also include golf courses, private parks, and recreation areas within private developments. An open area may consist of a combination of hardscape and landscape, typical of plazas, sculpture gardens, and gathering places. Streets, sidewalks, parking lots, and similar improvements, although not covered by structures, are not included in the definition of an "open area."

outlines vegetative landscaping and planting guidelines for proposed recreational and habitat areas.

- **Circulation** describes the proposed circulation network and identifies the components and design standards for movement of vehicles, pedestrians, and bicyclists; access to transit; transportation connections to adjacent systems; improvements to existing transportation infrastructure within Brisbane; and development of new facilities.
- **Infrastructure** describes proposed infrastructure improvements to provide sewer, potable and recycled water, storm drainage, and energy and telecommunications infrastructure for the Baylands.
- **Public Facilities Financing** identifies the applicant's proposed public financing strategies and mechanisms, along with ownership and maintenance responsibilities for Specific Plan facilities and infrastructure.
- **Implementation** identifies key implementing actions and subsequent approvals for Baylands development needed from the City and other regulatory agencies. This chapter describes the proposed system for City review and approval of site-specific development projects within the Baylands.

c. Land Use Program

The Baylands Specific Plan proposes development of 2,200 residential units and 6.5 million square feet of retail, commercial, office, conference, research and development ("R&D"), and campus uses; 500,000 square feet of hotel use; and a middle school, open space, and parks and trails within the 680.1-acre Specific Plan area. Per the requirements of the Brisbane General Plan, residential uses are clustered in the northwestern portion of the site in proximity to the Bayshore Caltrain station. **Figure 3-5**, **Table 3-1a**, and **Table 3-1b** identify the Specific Plan's proposed land use plan and development statistics.

Table 3-1c and **Table 3-1d**, below, identify the reasonable assumptions for Baylands development needed for EIR analyses, such as population and employment at buildout and the breakdown of residential building types and commercial use types.

Figure 3-5: Proposed Land Use

SOURCE: The Baylands Specific Plan, 2025.

Table 3-1a: Proposed Land Use Program by Acreage

Land Use	Area West of the Caltrain Right-of-Way (in acres)[a]	Area East of the Caltrain Right-of-Way (in acres)[a]	Specific Plan Total
Land Area			
Residential	52.8	0.0	**52.8**
Commercial	48.8	78.3	**127.1**
Amenities Area	2.6	0.0	**2.6**
Existing Use Areas[b]	5.8[c]	32.5[d]	**38.3**
Open Space/Open Area	59.4	97.6	**157.0**
Sustainable Infrastructure	0.0	90.8	**90.8**
Roadway Rights-of-Way	37.4	26.3	**63.7**
Subtotal	*206.8*	*325.5*	***532.3***
Water			
Brisbane Lagoon	0.0	121.8	**121.8**
Existing Land Area that will be Inundated on a Daily Basis Due to Sea Level Rise by 2100	0.0	26.0	**26.0**
Subtotal	*0.0*	*147.8*	*147.8*
TOTAL	**206.8**	**473.3**	**680.1**

SOURCES: The Baylands Specific Plan, 2025; City of Brisbane 2024.

NOTES:

a. Acreages are based on Year 2100 land area following approximately 83 inches of sea level rise.
b. Represents lands not owned by the applicant.
c. Includes Machinery & Equipment building (2.2 acres) and existing fire station site (3.6 acres).
d. Includes Recology Facilities (3.6 acres), Golden State Lumber (5.3 acres), Bayshore Sanitation Pump Station (0.1 acres), and Kinder Morgan Tank Farm/City Corporation Yard site (23.5 acres).

Table 3-1b: Land Use Program by Dwelling Units and Building Square Footage

	Maximum Permitted		
	Dwelling Units	**Commercial Building Area (in square feet)**	**Hotel Building Area (in square feet)**
West of the Caltrain Right-of-Way	2,200	4,000,000	500,000
East of the Caltrain Right-of-Way	—	2,500,000	—
TOTAL	**2,200**	**6,500,000**	**500,000**

NOTES: The Specific Plan permits a portion of the maximum permitted 6.5 million square feet of commercial use to be located within areas designated residential in the form of:

- "**Active Ground Floor**" uses including retail, restaurants, commercial services, offices, and public/semi-public uses permitted along specified street frontages within Low-, Mid-, and High-Density Residential areas. Active Ground Floor commercial uses are limited to 25,000 square feet of space within the Bayshore District.
- An unspecified amount of commercial and public/semipublic uses are permitted as "**Residential Flex Space**" (RFS) on the ground floor of residential units within Low-Density Residential areas where AGF is not allowed or required.

Table 3-1c: Baylands Land Use Program Assumed for Environmental Analysis Purposes

	West of Caltrain Right-of-Way	East of Caltrain Right-of-Way	Off-Site	Total
Dwelling Units[a]	***2,200***			***2,200***
Attached Single Family	1,159			1,159
Multifamily Housing Low Rise	95			95
Multifamily Housing Mid Rise	347			347
Multifamily Housing High Rise	599			599
Resident Population	4,905			4,905
Commercial Building Square Footage[b]	***4,000,000***	***2,500,000***		***6,500,000***
General Office	3,897,800	2,500,000		6,397,800
Retail	102,200			102,200
Baylands Employment	13,915	5,565		19,480
Hotel Rooms	***800***			***800***
Infrastructure and Amenities				
Middle School	350 students			
Amenities Building	20,000 s.f.			
Open Space/Open Area Improvements	See Table 3-1d			
Fire Station		House a ladder truck company + squad	10,000 s.f.	
Water Storage Tank Capacity		3,160,000 gal		
Water Recycling Facility Capacity		1.0 mgd		
On-Site Energy Generation		92,445 MWh		
Solar Farm		55 acres		
Switching Substation		2.0–3.0 acres		
Distributed Battery Storage		30 MW		30 MW
Utility Scale Battery Storage		250 MW		250 MW
Off-Site Potable Water Lines			1,000 feet	
Off-Site Recycled Water Lines			5.5 miles	

SOURCES: Baylands Specific Plan, 2025; Desert Shores Consulting, 2025.

NOTES:

a. The breakdown of Baylands' 2,200 dwelling units and 6.5 million square feet of commercial use by residential and commercial type represents reasonably foreseeable Baylands development based on the various provisions of the Specific Plan, including provisions that provide flexibility in the mix of residential and commercial building and use types and development intensities for future site-specific development projects throughout the Baylands. These breakdowns are intended for analytical purposes and are not intended to be used as regulatory maximums or requirements.

b. The Baylands Specific Plan requires that a minimum of 85,000 MWh of renewable electricity be generated within the Baylands. Based on the reasonably foreseeable mix of building types anticipated within the Baylands, actual renewable energy generation would be 92,445 MWh annually.[52]

[52] Thornton Tomasetti Inc. 2021. *The Baylands Energy Plan*. May 2021.

Table 3-1d: Breakdown of Proposed Open Space/Open Area Functions and Types

Specific Plan Open Space Typologies	Acreage	Functions	Open Space/Open Area Type and Acreage	
Urban Plazas				
Bayshore Station Plaza	1.4	Gathering place for Caltrain riders, including seating, public art, and information signage.	Park	1.4
Active Recreation Areas				
Community Fields	7.4	Recreational lawn and youth sports field(s), picnicking, playground, fitness path, dog park.	Park	7.4
Bay Trail	20.0	Extension of the San Francisco Bay Trail for use by pedestrians and bicyclists.	Park	20.0
Community Greens				
Baylands Park	5.8	Passive recreation, dog park, formal and natural gardens.	Park	5.8
Sunnydale Park	0.8	Passive recreation, gathering place.	Park	0.8
Roundhouse Park	3.9	Passive recreation, historic preservation, outdoor dining and picnicking, gathering place.	Park	3.9
Ecological Greenspaces				
Lagoon Park	15.4	Habitat restoration and enhancement, trails, and passive recreation.	Park Habitat	5.3 10.1
The Ecological Park	7.3	Habitat restoration and enhancement, stormwater treatment, trails, picnicking.	Park	7.3
Visitacion Creek	30.8	Habitat restoration and enhancement, trails.	Park Habitat	3.1 27.7
Icehouse Hill	24.3	Habitat restoration and enhancement, trails.	Park Habitat Resource Production	2.1 21.8 0.4
Baylands Preserve	14.1	Habitat connectivity, restoration, and enhancement; trails.	Park Habitat	7.7 6.4
Stormwater Detention	13.8	Stormwater detention, water quality management	Public Safety	13.8
Green Edges				
West Rail Trail	8.5	Habitat connectivity, integrated stormwater treatment.	Habitat	8.5
East Rail Green Edge	3.5	Habitat restoration and enhancement, visual screening	Habitat	3.5
OPEN SPACE/OPEN AREA TOTAL	**157.0**		**Park** **Habitat** **Public Safety** **Resource Production**	**64.8** **78.0** **13.8** **0.4**

SOURCES: Baylands Specific Plan, 2025; Desert Shores Consulting.

Land Use Designations and Building Types

Each of the 10 land use designations identified in the Specific Plan's land use plan (**Figure 3-5**) and the specific types of development permitted within these designations are described below.

Residential Land Use Designations

- Low-Density Residential areas consist of a mix of the following building types:
    - Duplex/Single Family units have a maximum height of 50 feet. They are freestanding or paired units, 3 stories with an allowed 4th-story deck and penthouse space that must not exceed half the size of the 3rd story. These units have individual at-grade garages and are only permitted in Low-Density Residential areas.
    - Townhome units have a maximum height of 50 feet, 3 stories with an allowed 4th-story deck and penthouse space that must not exceed half the size of the 3rd story. These units have varying lot widths and depth, as well as individual at-grade garages. They are distinguished from Duplex/Single Family buildings in that Townhome units are attached with three or more units per building. They are permitted in Low-, Mid- and High-Density Residential areas.
    - Multi-Family Low includes buildings with a maximum height of 50 feet and with no more than 22 units per building. These may be designed as townhome units over single-story flats or as stacked townhomes. These units are 3 stories with an allowed 4th-story deck and penthouse space that must not exceed half the size of the 3rd story. Parking is to be provided at-grade or in a below-grade parking structure. This building type is only permitted within Low-Density Residential areas.

  An unspecified amount of commercial and public/semi-public uses are permitted as "Residential Flex Space" on the ground floor of residential units within Low-Density Residential building types where active ground floor uses are not allowed or required provided that all revenue generated by such businesses are distributed to the owner of the residential dwelling unit above.
- Mid-Density Residential consists of a mix of the following building types:
    - Multi-Family Mid includes mid-rise buildings up to a maximum height of 110 feet (which would typically allow a 9-story building). This type of housing is generally located along Sunnydale Avenue and Geneva Avenue. Parking is proposed to be provided at-grade or in a below-grade parking structure. This building type is proposed to have active ground floor retail and active pedestrian environments as specified for each District.

      This building type is permitted within both Mid- and High-Density Residential areas.
    - Townhome units as described above.

- High-Density Residential consists of a mix of the following building types:
    - Multi-Family High provides for residential towers with a maximum height of 270 feet (which would typically allow 22-story buildings). This building type is located west of the Caltrain rail right-of-way. Parking is proposed within structures accessed from Frontage Road. Multi-Family High buildings may have ground floor retail and active pedestrian environments at locations specified in Development District, below.
    - Multi-Family Mid units as described above.
    - Townhome units as described above.

Commercial Land Use Designations

- Low-Density Commercial areas consist of a mix of the following building types:
    - Campus Low-Rise buildings have a maximum height of 100 feet (which would typically allow 6- to 8-story buildings). Designed primarily for office use, these buildings may also provide ground floor retail and public services uses. Parking will consist of at-grade lots or above-grade parking structures.
- Mid-Density Commercial areas consist of a mix of the following building types:
    - Campus Low-Rise buildings as described above.
    - Campus Mid-Rise buildings have a maximum height of 150 feet (which would typically allow 10- to 12-story buildings), providing for a range of commercial uses, such as R&D, laboratory, and general office. These buildings may also have active ground floor retail and public services uses. Campus Mid-Rise buildings are proposed to face open space areas in a campus-like setting. Parking structures or podiums for these buildings are accessed primarily via Frontage Road and Campus Parkway.
- High-Density Commercial areas consist of a mix of the following building types:
    - TOD[53] Commercial buildings have a maximum height of 260 feet (which would typically allow a 20-story building). This type is located near the Bayshore Caltrain Station Plaza and is designed to have a variety of commercial uses. Designed primarily for office use, these buildings may also have active ground floor retail and public services uses. Parking structures or podiums for these buildings will be primarily accessed from Frontage Road.
    - Hospitality development consists of hotel buildings with a maximum of 240 feet (which would typically allow a 20-story building). This building type is intended

[53] Transit-oriented development (TOD) refers to high-intensity residential, commercial office, and mixed-use development that is within walking distance (generally less than ½ mile) to transit.

for use around the Bayshore Caltrain Transit Plaza. Parking structures or podiums for these buildings are accessed primarily via Frontage Road. These buildings comprise the 500,000 square feet of hotel use in the Baylands.

Specific Plan Amenities, Open Space/Open Area, and Infrastructure Land Use Designations

- Amenities Area
    - Amenities buildings are proposed to have a maximum height of 60 feet (which would typically allow a 3- to 5-story building) and are intended for indoor and outdoor gathering spaces, recreation, fitness, food and beverage, and clubhouse uses. The Specific Plan would not count Amenities buildings that are provided for the exclusive use of residents and guests of residents for recreation or social purposes, as part of the 6.5 million square feet of commercial development.
- Open Space/Open Area
    - Open Space/Open Area encompasses lands proposed for a variety of recreational, resource conservation, and resource production purposes (e.g., Mission Blue Nursery). The Specific Plan proposes that cultural, public, semi-public facilities and accessory-use buildings necessary to support operation and maintenance of designated Open Space areas would not be included in the 6.5 million square feet of commercial development floor area.
- Sustainable Infrastructure
    - Sustainable Infrastructure areas provide space for renewable energy generation facilities, battery energy storage, and other developing technologies. These areas also include water recycling and storage facilities and other infrastructure uses such as the existing North County Fire Station site. The Specific Plan proposes that buildings needed to support operations of Sustainable Infrastructure areas would not be considered part of the maximum 6.5 million square feet of commercial development floor area.

Land Use Designations for Existing Use Areas

Because the Brisbane General Plan requires development within the Baylands Subarea "be subject to the City's approval of a single specific plan for the entirety of the Baylands Subarea," the Specific Plan encompasses properties with existing uses that are not owned by the applicant and are not expected to change or expand over time. The Specific Plan designates each such site as "Existing Use Area" and provides site-specific permitted use and development zoning regulations that codify existing uses and development. The Specific Plan requires site-specific

development review and environmental documentation for any change in site development for the following existing uses:

- Recology parcels within the Baylands Subarea;
- Golden State Lumber along the east side of Tunnel Avenue;
- Kinder Morgan tank farm;
- Machinery & Equipment Company site;
- Bayshore Sanitary District facilities; and
- Two small commercial areas along Bayshore Boulevard, including parcels in the northwestern corner of the Specific Plan area and at Main Street.

Because the sites identified above are not expected to change their use or expand over time, the environmental analysis undertaken for the Baylands Specific Plan assumes that the above uses would maintain their current configuration and continue operating at current levels. While conversion of the existing Fire Station No. 81 site to a fire training facility would change its use, no new facilities or other physical changes to the site are proposed.

Based on the land use designations identified in **Figure 3-5**, the Specific Plan identifies maximum building heights permitted throughout the Baylands (see **Figure 3-6**).

Development Districts

As shown in **Figure 3-7**, the Baylands Specific Plan organizes proposed development into five districts, each of which is described below. As shown for each District, the Baylands Specific Plan sets a maximum number of dwelling units and commercial square footage that may be permitted within any individual block, provided that the maximum permitted number of units and commercial square footage within each District and the Specific Plan area are not exceeded.

Figure 3-6: Proposed Maximum Permitted Building Heights

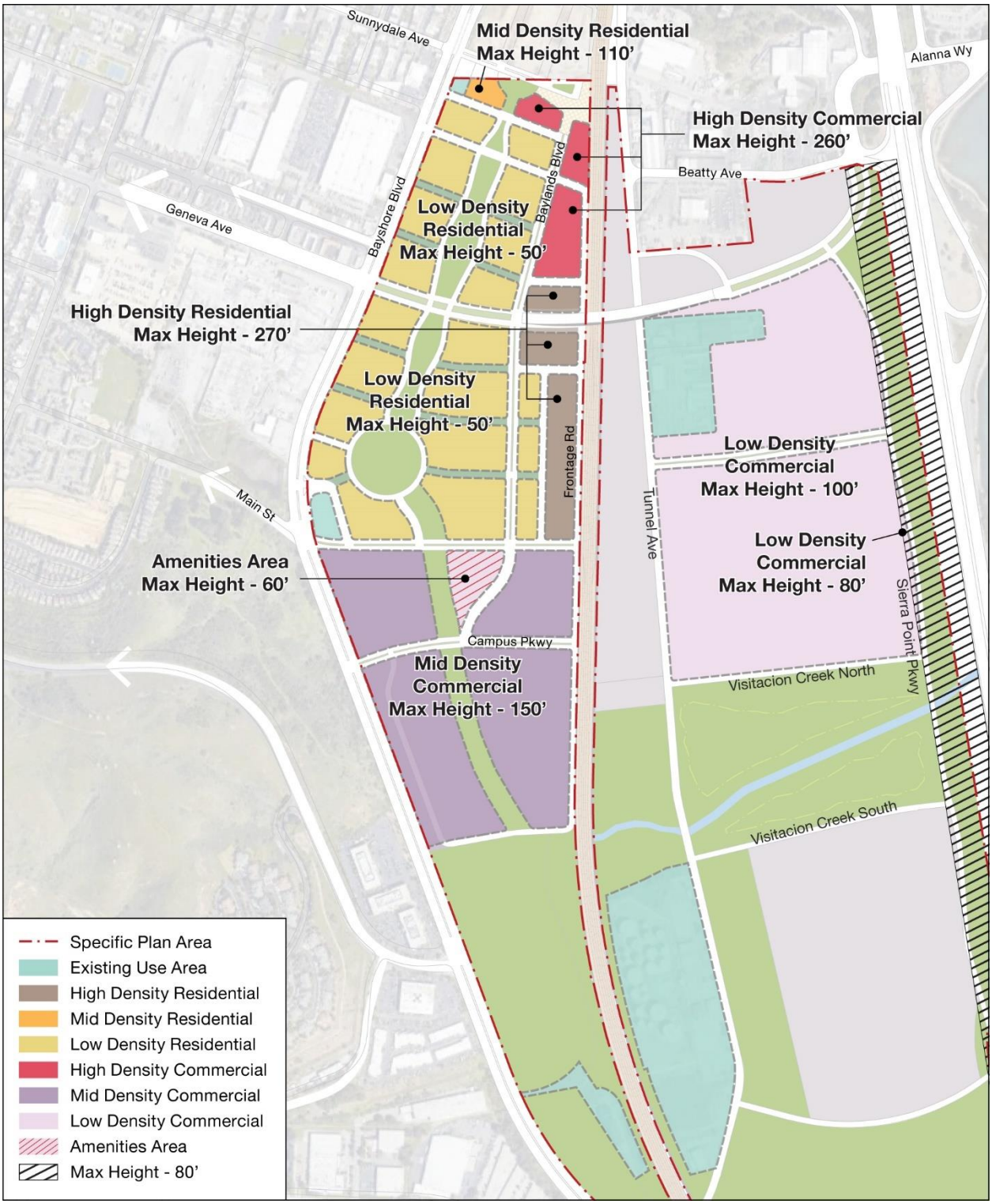
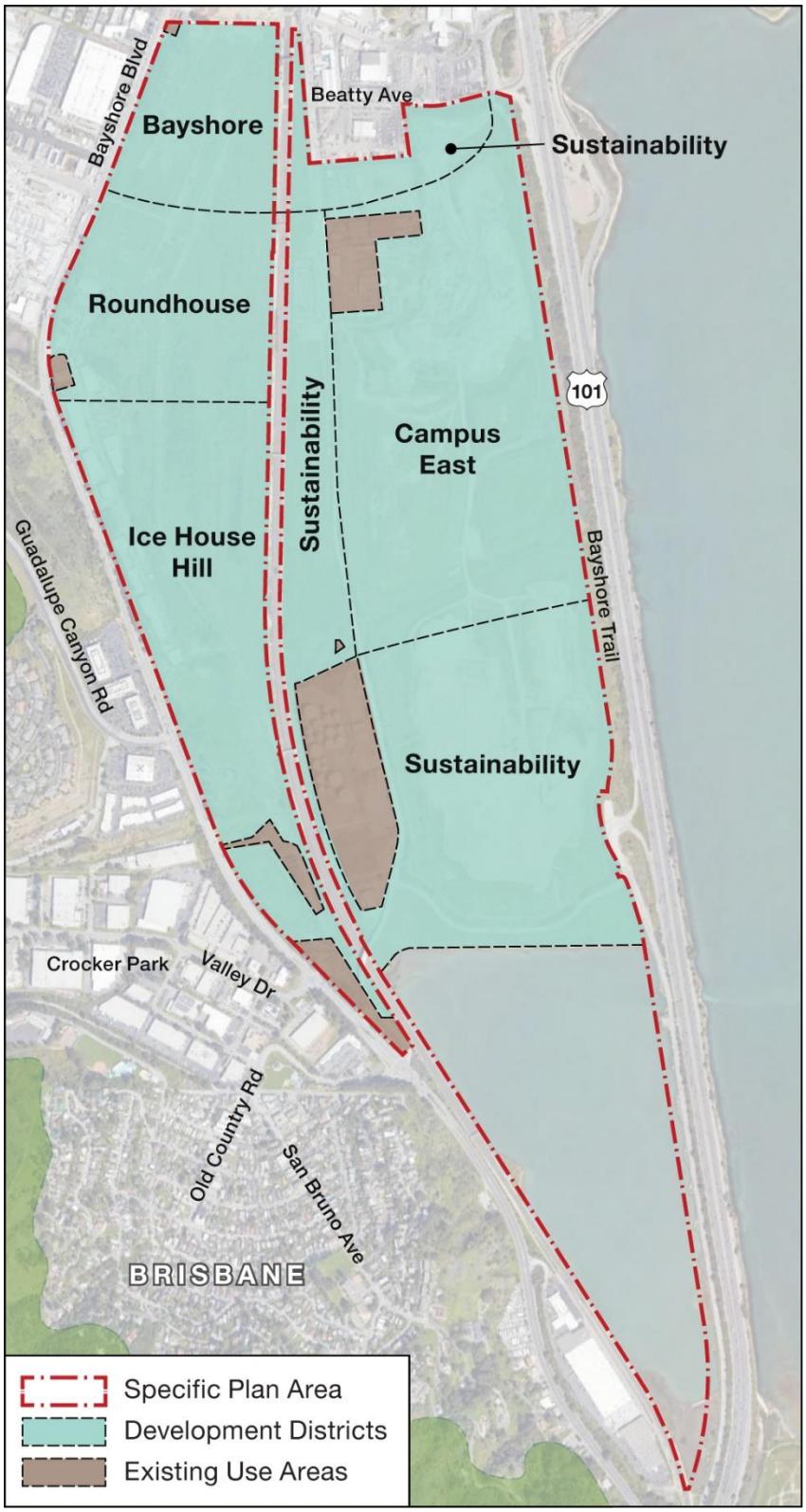


Figure 3-7: Specific Plan Districts

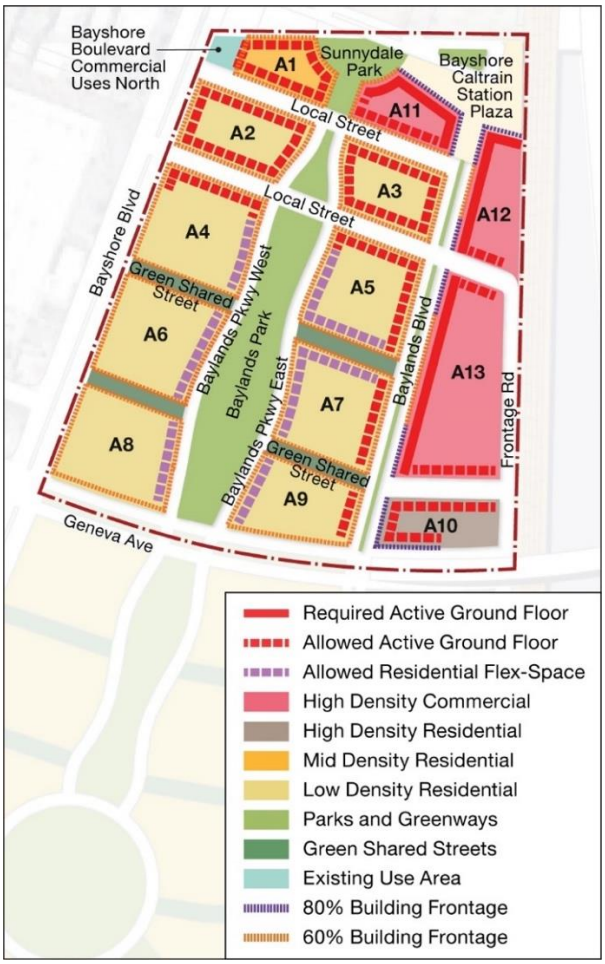


Bayshore District

The Bayshore District is located in the northwest corner of the Specific Plan area, bounded by Bayshore Boulevard, the Caltrain right-of-way, Sunnydale Avenue, and Geneva Avenue. A maximum of 730 dwelling units and 1.1 million square feet of commercial development are permitted (see **Figure 3-8**). High-density commercial uses are proposed adjacent to the Bayshore Caltrain station and Caltrain right-of-way. High-density commercial development is proposed to consist of office towers up to 260 feet high (typically 20+ stories). A high-density residential tower (up to 270 feet high, typically 20+ stories) is proposed along the north side of Geneva Avenue west of the Caltrain right-of-way. Lower density residential blocks predominantly consisting of 50-foot-high (typical 3- to 5-stories) residential structures are oriented along a central open space area consisting of Baylands Park and Sunnydale Park (see Draft EIR Section 3.3.2 d for a description of these parks).

A maximum of 1,150 off-street parking spaces are permitted within this District.

Figure 3-8: Bayshore District Development Plan



Block Number	Land Use	DUs per Block (max.)
A1	Mid Density Res.	170
A2	Low Density Res.	55
A3	Low Density Res.	45
A4	Low Density Res.	70
A5	Low Density Res.	65
A6	Low Density Res.	65
A7	Low Density Res.	65
A8	Low Density Res.	80
A9	Low Density Res.	70
A10	High Density Res.	200

Buildings where "Active Ground Floor**" is required must have retail, restaurants, commercial, or other pubic/semi-public services or uses on the ground floor building frontage. Where "allowed," these uses may be provided.**

80% or 60% Building Frontage **indicates the minimum % of the building that must be placed at the minimum required setback in order to encourage pedestrian activity.**

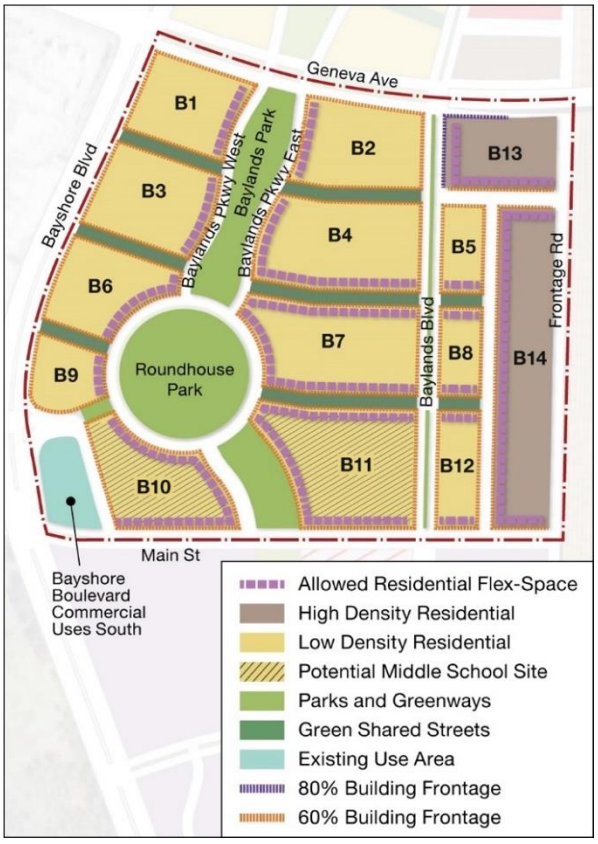
Block Number	Land Use	Max. Commercial Floor Area (ft²)
A11	High Density Comm.	250,000
A12	High Density Comm.	450,000
A13	High Density Comm.	550,000

Block Number	Max. Active Ground Floor Commercial Floor Area (ft²)
A1-A3, A5, A7, A9-A10	25,000

Roundhouse District

The Roundhouse District is located in the western portion of the Specific Plan area, bounded by Bayshore Boulevard, Geneva Avenue, the Caltrain right-of-way, and Main Street (see **Figure 3-9**). The focal point of this district is Roundhouse Park, which includes adaptive use of the historic roundhouse for an open-air theater with flexible seating and stage, community space, a café, and other community-oriented uses.

Figure 3-9: Roundhouse District Development Plan



Block Number	Land Use	DUs per Block (max.)
B1	Low Density Res.	75
B2	Low Density Res.	75
B3	Low Density Res.	80
B4	Low Density Res.	110
B5	Low Density Res.	35
B6	Low Density Res.	65
B7	Low Density Res.	115
B8	Low Density Res.	40
B9	Low Density Res.	40
B10	Low Density Res.	70
B11	Low Density Res.	130
B12	Low Density Res.	50
B13	High Density Res.	185
B14	High Density Res.	700

80% or 60% Building Frontage **indicates the minimum % of the building that must be placed at the minimum required setback in order to encourage pedestrian activity.**

The High-Density Residential uses proposed for Blocks B-13 and B-14 provide for residential towers with a maximum height of 270 feet (typically up to 20 stories). Thus, 20-story residential towers are anticipated along the west side of the Caltrain right-of-way from Geneva Avenue to Main Street. The balance of this District would be designated Low-Density Residential for single family and duplex residential buildings up to 4 stories in height fronting on open space areas, including Baylands Park and Roundhouse Park.[54] A middle school (grades 6–8) site is proposed in the vicinity of Main Street within the Bayshore School District portion of either Block 6, 9, or 10, or to the south of Main Street within the Icehouse Hill District.

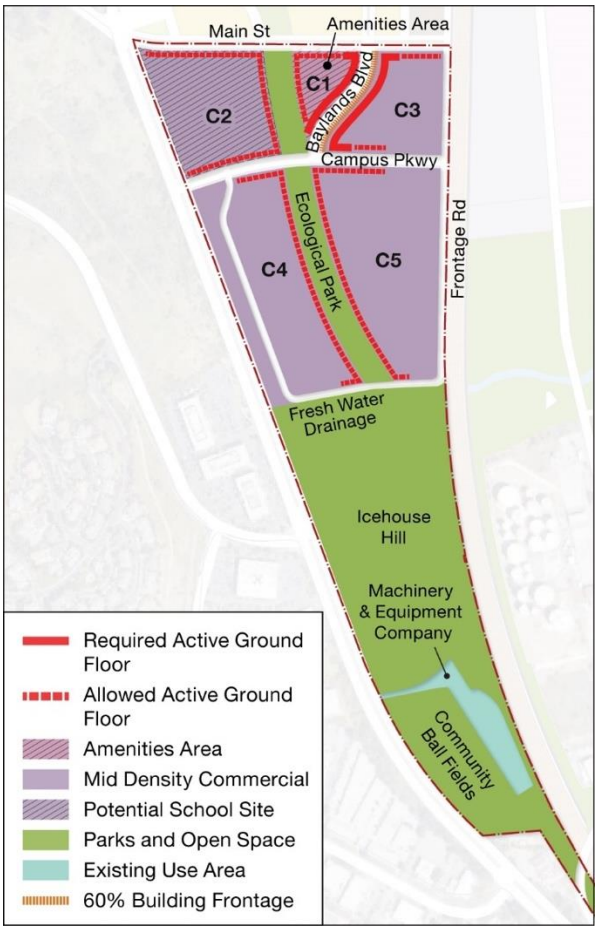
[54] See Draft EIR Section 3.3.3 a for a description of proposed parks.

A maximum of 1,200 off-street parking spaces are permitted within this District.

Icehouse Hill District

The Icehouse Hill District is located north of Icehouse Hill between Bayshore Boulevard and the Caltrain right-of-way. This District is proposed for a maximum of 3.4 million square feet of commercial office development. As illustrated in **Figure 3-10**, the Icehouse Hill District will consist primarily of commercial office buildings up to 150 feet in height (typically 8–10 stories) fronting onto the Ecological Park.

Figure 3-10: Icehouse Hill Development Plan



Block Number	Land Use	Max Commercial Floor Area (ft²)
C1	Amenities Area	—
C2	Mid Density Comm.	800,000
C3	Mid Density Comm.	750,000
C4	Mid Density Comm.	1,000,000
C5	Mid Density Comm.	1,150,000

Buildings where "Active Ground Floor**" is required must have retail, restaurants, commercial or other pubic/semi-public services or uses on the ground floor building frontage. Where "allowed," these uses may be provided.**

60% Building Frontage **indicates the minimum % of the building that must be placed at the minimum required setback in order to encourage pedestrian activity.**

Baylands Boulevard south of Main Street is designed to function as a "shopping street" with ground floor shops, cafés, and restaurants fronting the street and plazas on the east side integrated into the office buildings and a residential amenity facility on the west side. The Icehouse Hill District includes several important open space resources. A middle school (grades 6–8) is proposed in the vicinity of Main Street within the Bayshore School District portion of Block C2 of the Icehouse Hill District, or within the Roundhouse District.

A maximum of 6,150 off-street parking spaces are permitted within this District.

Campus East District

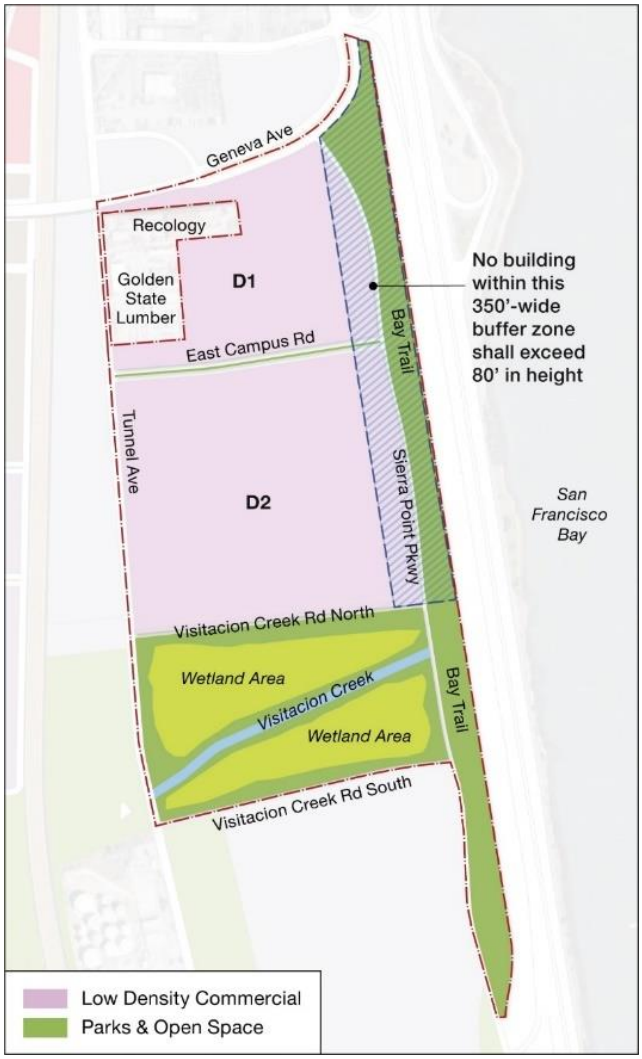
The area east of the Caltrain right-of-way comprises the Campus East District, which will be developed with a maximum of 2.5 million square feet of low-density commercial office uses north of Visitacion Creek Park. Buildings up to 100 feet height (typically 4–6 stories) will be oriented along Sierra Point Parkway, providing views of San Francisco Bay over the US 101 freeway (see **Figure 3-11**).

As shown in **Figure 3-11**, the existing Golden State Lumber and Recology facilities will remain in their present location. The Specific Plan designates these parcels as "Existing Use Area," but does not include them within the Campus East District.

A maximum of 2,485 off-street parking spaces are permitted within this District.

This District will be constructed over a Title 27-compliant cap over the existing refuse layer. Landfill gas and leachate control systems will also be installed (see Section 2.6.2, *Title 27 Final Landfill Closure*, for a description of Title 27 landfill closure). Vapor intrusion mitigation systems will be integrated into the building design.

Figure 3-11: Campus East District Development Plan



Block Number	Land Use	Max. Commercial Floor Area (ft²)
D1	Low Density Comm.	1,200,000
D2	Low Density Comm.	1,500,000

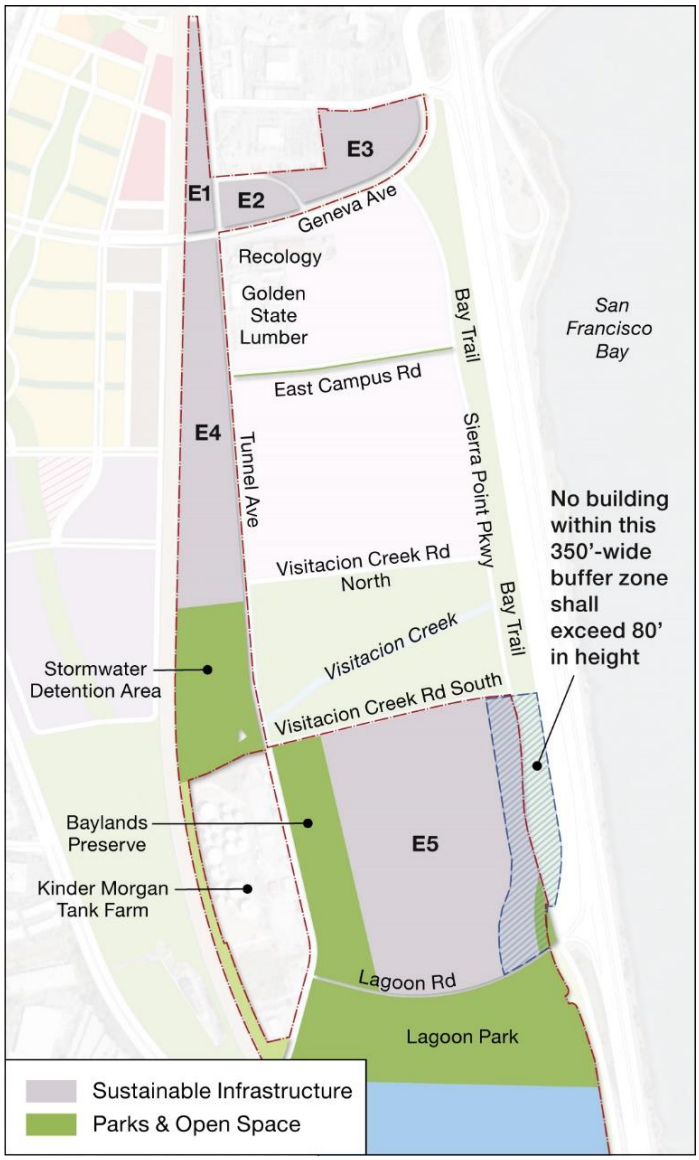
Sustainability District

The Sustainability District includes the area between Tunnel Avenue and Caltrain right-of-way, the area north of Geneva Avenue, and the area between Visitacion Creek and Lagoon Park (see **Figure 3-12**). This area is planned for a variety of sustainable infrastructure and open space/open area uses including:

- Sustainable Infrastructure Uses
  - Solar farm
  - Battery storage
  - Switching substation
  - Water storage
  - Water recycling facility
  - Stormwater detention
  - Fire station/training facilities
- Open Space/Open Area
  - Lagoon Park
  - Baylands Preserve
  - Brisbane Lagoon

Structures within the Sustainability District are limited to a maximum height of 100 feet (80 feet for structures within 350 feet of US Highway 101).

Figure 3-12: Sustainability District Development Plan



Block Number	Land Use
E1	Sustainable Infrastructure
E2	Sustainable Infrastructure
E3	Sustainable Infrastructure
E4	Sustainable Infrastructure
E5	Sustainable Infrastructure

Displacement and Relocation of Existing Uses

Existing leases for businesses outside of Existing Use areas will lapse or be terminated by the property owner prior to site grading, including approximately 231,400 square feet of industrial building area along Industrial Way along with other interim uses throughout the site, resulting in displacement of businesses from the Baylands. Existing Use Areas include Recology uses along Tunnel Avenue, Golden State Lumber, Kinder Morgan Tank Farm, Machinery & Equipment Company, and the Bayshore Sanitary District Pump Station. The Mission Blue Nursery will be relocated to the former police shooting range on Icehouse Hill.

d. Open Space and Open Areas

The Baylands Specific Plan would establish a 157-acre network for the preservation of natural resources and outdoor recreation and gathering places, which is illustrated in **Figure 3-13** and consists of:

- Active recreation areas
- Urban plazas
- Community greens
- Ecological greenspaces
- Green edges

Active Recreation Areas

Two active recreation areas are proposed to provide opportunities for outdoor exercise and community sports in locations accessible from Baylands neighborhoods via bicycle or walking, as well as accessible to Brisbane residents. These areas are intended to accommodate an array of physical activities and play for all ages and abilities.

Community Fields (7.4 acres)

This approximately 7.4-acre park includes a flexible recreational irrigated turf lawn, ballfield, picnic and games area, amenity pavilion with restrooms, playground, fitness station(s), buffer plantings, and shade structure(s). The park will be night lighted, including lighting for active nighttime sports activities. Vehicular parking would also be provided. Pedestrian and bicycle trails will connect to the existing Crocker Trail, Icehouse Hill trail network, Tunnel Avenue, and the proposed Ecological Park.

Figure 3-13: Baylands Open Space/Open Area Network

Bay Trail (20.0 acres)

The San Francisco Bay Trail will be extended through the Baylands, connecting to existing portions of the trail to the north and south of the Specific Plan area, with accessible trailhead connections at Geneva Avenue, Lagoon Road, Campus Drive North, Campus Drive South, and Sierra Point Parkway. Approximately 21.2 acres will be reserved for the Bay Trail, 1.2 acres of which will be subject to sea level rise through the Year 2100. Low-level safety lighting is proposed to be provided along the trail.

The trail extension is to be designed as a Class I shared use path along Sierra Point Parkway connecting to sidewalks and Class IV bicycle facilities on Geneva Avenue in the northern portion of the Baylands.[55] To the south, the Bay Trail would connect to a Class I shared use path through Lagoon Park and Class II bike facilities (no provisions for pedestrians) along the existing Sierra Point Parkway. The trail extension is proposed to meet the design standards set forth in the San Francisco Bay Trail Design Guidelines and Toolkit. No improvements to the existing portion of the Bay Trail, which consists of the bicycle lanes along Sierra Point Parkway south of Lagoon Road, are proposed.

The Bay Trail is proposed to incorporate stormwater treatment areas that cleanse water with green stormwater infrastructure prior to draining toward Visitacion Creek, Lagoon Park, and Geneva Avenue. The existing culvert is proposed to be replaced with a clear span bridge, maintaining connectivity for small terrestrial fauna.

Community Greens

Community greens provide centrally located park spaces that support social connectivity along with opportunities for passive recreation—such as display gardens, fountains, dining and seating areas—and active recreation—such as irrigated turf event/play lawns, children's areas, and dog parks.

Sunnydale Park (0.8 acres) and Baylands Park (5.8 acres)

Approximately 6.6 acres of park area are proposed as a linear green, onto which medium- to high-density residential uses would face. The parks are proposed to be night lighted.

The 5.8-acre Baylands Park is a linear green space for the Bayshore and Roundhouse districts, onto which low-density residential uses would face. East–west oriented paseos and green shared streets would connect the park to retail uses along Bayshore Boulevard. Baylands Park is

[55] A Class I Shared-Use Path is completely separated from the street with a limited number of street and driveway crossings. Shared-Use Paths are typically shared by bicyclists and pedestrians. A Class IV Protected Bike Lane is located within the curb line adjacent to the vehicle travel lane. While part of the roadway cross section, a Class IV lane is separated from moving traffic vertically, horizontally, or both with a minimum 1.5-foot buffer (3 feet adjacent to parking).

intended to serve as a central social green for the Baylands. It would host an array of activities, with features such as native and botanic gardens, vegetated swales, irrigated turf community recreational and event lawns, play area, plaza, dog park/run, rain garden, shade structure, restroom pavilion, art walk, and flexible seating areas.

Located at the north end of the central green, Sunnydale Park spans the city limits of Brisbane and San Francisco and adjoins high-density residential development and residential areas to the north in San Francisco. Sunnydale Park is proposed to provide green infrastructure features, such as native and gardens and bioretention. Small passive uses also proposed for this space include art walk and flexible seating areas. This park is intended to provide for safe pedestrian and bicycle movement between (1) Baylands residential and commercial areas and (2) the urban plaza at the entry to the Bayshore Caltrain station.

Roundhouse Park (3.9 acres)

Roundhouse Park is proposed as a multi-purpose community gathering space for the Baylands, providing community event spaces focused on the restored historic Roundhouse. Because of required grade changes to accommodate site remediation that is required prior to development within the western portion of the Baylands, the historic Roundhouse would be dismantled and then reconstructed in its current location following site remediation and grading. The restored Roundhouse and adjacent park area are proposed to include an irrigated turf event lawn, outdoor dining area, informal play area, garden walks, a flexible lawn that can be utilized for event staging, industrial art and history garden, native gardens, event pavilion, bermed seating, outdoor cafe, and an open-air theater utilizing the cast iron columns and beams at the inner curved wall of the Roundhouse. Roundhouse Park is proposed to be night lighted to accommodate nighttime use and activities. The potential also exists for joint use of Roundhouse Park with the middle school proposed for the Baylands.

Urban Plaza

An urban plaza adjacent to the Bayshore Caltrain Station has been designed primarily for pedestrian uses, providing public amenities such as seating and gathering areas.

Bayshore Caltrain Station Plaza (1.4 acres)

The Bayshore Caltrain Station Plaza is intended as a gathering place at the entry to the Bayshore Caltrain Station. The plaza is proposed to feature an arrival plaza, pavilion, cafe garden, outdoor seating areas, kiosk with time boards, bike parking, and areas for transit boarding and queuing. High-limbed canopy trees (lowest rung 8 to 9 feet above finish grade), herbaceous planting and planters, eco-regionally appropriate plantings, and small irrigated turf lawn space are proposed. The plaza is proposed to be designed to limit vehicular access with crash-rated barriers in the form of passive seat walls and planters with sparing use of bollards. A dedicated Baylands shuttle drop-off would separate from a multimodal drop off intended for private

vehicles, non-Baylands shuttles, and transit agencies. The Bayshore Caltrain Station Plaza is proposed to include night lighting.

Ecological Greenspaces

Open space areas for preservation and enhancement of important habitat areas include the Brisbane Lagoon and Lagoon Park, Visitacion Creek, Icehouse Hill, and the Ecological Park. In addition to habitat preservation and enhancement, the areas provide site drainage and water quality treatment functions, as well as public access to recreation within natural settings.

Brisbane Lagoon (147.8 acres) and Lagoon Park (15.4 acres)

As a result of sea level rise, Brisbane Lagoon is expected to expand from 121.8 acres to 147.8 acres by the Year 2100, leaving 15.4 acres of land area within Lagoon Park. The design of Lagoon Park provides for the protection and enhancement of biological resources along with compatible recreational activities such as outdoor education and wildlife observation. The park is proposed to include multi-use paths, a native plants discovery garden, play area, community space, and educational signage. Uses that promote large gathering and/or excessive noise would be prohibited within 50 feet of designated habitat areas. Night lighting is proposed for a parking area, along with low-level lighting for paths.

Habitat restoration and enhancement is proposed to include tidal flats, tidal marsh, grassland, and coastal scrub (see Section 3.3.2 f, below, for a detailed description of Lagoon Park restoration and enhancement. Lagoon Park improvements would follow completion of Title 27 landfill closure activities, which would remove existing vegetation for placement of an impermeable landfill cap over the existing refuse layer along with landfill gas and leachate control systems (see Section 2.5.3, *Title 27 Final Landfill Closure*, for a description of Title 27 landfill closure requirements). The existing east–west alignment of Lagoon Road is proposed to be relocated to the north to align with the US 101 freeway on- and off-ramps as well as to protect the roadway from projected sea level rise through 2100.

Visitacion Creek (30.8 acres)

Immediately upstream of the Specific Plan area's eastern boundary, Visitacion Creek's tidally influenced channel is proposed to be widened to rehabilitate its ecological functions, including on-site wetland creation featuring an enhanced tidal channel, restored salt marsh, native scrub, and grasslands, along with freshwater seasonal wetlands. Approximately 39.3 acres of land area are proposed for Visitacion Creek, 8.5 acres of which would be subject to daily inundation due to sea level rise by the Year 2100, leaving 30.8 acres of land within this open space area. See Section 3.3.2 d, below, for a detailed description of Visitacion Creek habitat restoration and enhancement.

Stormwater Detention Area (13.8 acres)

The area immediately east of the Caltrain right-of-way is proposed to be improved as a 13.8-acre ecologically focused stormwater detention area. This naturalized facility with "soft" planted edges of native species will provide permeable soils and forebays, as well as native plantings to slow flow rates and remove nutrients and pollutants. The eastern edge of the stormwater detention area is proposed to transition to Visitacion Creek.

Detention Area Example

Icehouse Hill (24.3 acres)

Icehouse Hill's ecological functions are proposed to be improved through protection, enhancement, and restoration of native grasslands, coastal scrub, and small pockets of seasonal wetlands. Planting of native butterfly host species is proposed to increase butterfly habitat extent and quality. Invasive species management is proposed due to the presence of Eucalyptus sp., fennel, and other non-native species (see Section 3.3.2 d, below).

In addition to maintaining the natural character and habitat value of Icehouse Hill, "low-impact" gravel trails, a nature play area, native gardens, butterfly garden, overlook(s), hillside slides, educational area(s) with group seating, multi-use trails, and outdoor educational area with educational signage are proposed.

Mission Blue Nursery, a non-profit nursery that collaborates with local communities to restore San Bruno Mountain's native habitats and cultivate its flora, is proposed to be relocated to the former police shooting range. Prior to its relocation, appropriate cleanup and remediation of the shooting range site will be completed.

Visual screening of the adjacent Kinder Morgan Tank Farm would also be provided in the form of naturalized vegetation.

The Ecological Park (7.3 acres)

The 7.3-acre Ecological Park is proposed as a primarily naturalized open space within the Icehouse Hill District. The primary feature of the Ecological Park is a central swale. Seasonal rains filling dry creek beds and bioswales are proposed to be directed to stormwater treatment areas within the park to improve water quality. Multi-use paths, overlook(s), shade structure(s), small lawn areas, plaza(s), flexible seating areas, and interpretive features are also proposed within this park.

Habitat restoration and enhancement within the Ecological Park is proposed to include grassland, coastal scrub, and woodland (see Section 3.3.2 d, below).

Baylands Preserve (14.1 acres)

The Baylands Preserve would be constructed following Title 27 landfill closure to provide habitat connectivity, wildlife crossings, and pedestrian and bicycle connectivity. The Specific Plan states that wetland habitats and woodland habitats would also be "allowed as deemed viable and beneficial to overall habitat value." A low-impact multi-use pathway and trailhead on the east side of the preserve is also "allowed" as a means of connecting pedestrians to Lagoon Park. Direct views of the Lagoon and Visitacion Creek are proposed to be provided as vantage allows.

Green Edges

Green Edges are proposed to support ecological goals, including supporting biodiversity by hosting dominant native plant communities and habitat for insects, small mammals, and reptiles. These spaces are also proposed to improve the visual experience within the Baylands.

West Rail Trail (8.5 acres)

The West Rail Trail is located adjacent to the Community Fields and Icehouse Hill and is proposed as a biological connector, including a sage-scrub ecology with integrated stormwater treatment areas. Tall and dense native vegetation screens are proposed adjacent to the railroad right-of-way. The West Rail Trail is proposed to link the Community Fields, Crocker Trail, Icehouse Hill, and the Ecological Park through a path system.

East Rail Green Edge (3.5 Acres)

The East Rail Green Edge is proposed to provide native sage-scrub plantings and assist in screening views of the railway and the tank farm.

e. Transportation

The Baylands Specific Plan proposes roadway and streetscapes, an "active transportation network" consisting of bicycle and pedestrian facilities, and a transit network. The plan establishes specific standards and guidelines for Baylands roadways along with design standards proposed for access and movement of pedestrians, bicyclists, transit, and vehicles.

Roadway Network

The Specific Plan is designed for US Highway 101 to continue providing regional vehicular access to the Baylands and Bayshore Boulevard. The planned Geneva Avenue extension through the Baylands from Bayshore Boulevard to Beatty Avenue/Alana Way will also provide regional access.

The Specific Plan organizes proposed streets within the Baylands using the Brisbane General Plan's functional classifications, adding a "green shared street" classification for select residential streets.[56] The proposed Baylands street network is identified in **Table 3-2** and illustrated in **Figure 3-14** through **Figure 3-29**.

Regional Roadway and Highway Connections

Connections to two north–south regional highway facilities, US 101 and Bayshore Boulevard, which form the eastern and western boundaries of the Specific Plan area will be provided.

- The **US 101 Freeway** would continue to serve as the key regional vehicular access to the Baylands with two major access points:
    - The Candlestick Interchange at Harney Way/Alana Way, generally serving the northern portions of the Baylands; and
    - The Sierra Point Interchange at Sierra Point Parkway, generally serving the central and southern portions of the Baylands.
- **Bayshore Boulevard** would also provide regional access to the Baylands, remaining one of the most transit accessible corridors for the Baylands, including the existing San Francisco Municipal Railway (Muni) Light Rail K/T Line and multiple existing and nearby Muni and SamTrans bus services. Bayshore Boulevard also serves as a major regional through route for vehicular travel. Geneva Avenue extension, which is a key facility proposed in the San Mateo-San Francisco Bi-County Transportation Study, would be extended from its current terminus at Bayshore Boulevard east to Beatty Avenue, terminating in a 4-way intersection with

San Mateo-San Francisco Bi-County Transportation Study

The 2013 Bi-County Transportation Study was undertaken by the San Francisco County Transportation Authority and the City/County Association of Governments of San Mateo County, along with the City of Brisbane, City and County of San Francisco, Peninsula Corridor Joint Powers Board (Caltrain), and others to assess the transportation improvements needed to support development of approximately 15,000 new housing units and over 14 million square feet of new employment uses proposed within the southeastern corner of San Francisco and the northeastern corner of San Mateo County including the Baylands.

The study identifies needed transportation improvement projects along the San Francisco/San Mateo county line and a funding strategy, including:

- US 101 Candlestick Interchange Re-Configuration
- Geneva Avenue Extension from Bayshore Boulevard to the US 101 freeway
- Harney-Geneva Bus Rapid Transit Line
- T-Third Street Light Rail Extension (Segment "S")
- Bayshore Caltrain Station Re-Configuration
- Bicycle-Pedestrian Connections
- Area-Wide Traffic Calming Program

It is anticipated that information from the Baylands Specific Plan EIR will assist Bi-County agencies determine whether any revisions to the 2013 list of transportation improvements might be needed.

[56] The Specific Plan also references "Frontage Road" as a roadway type. The Frontage Road identified in the Specific Plan functions as a Local Street.

Beatty Avenue and Alana Way as part of Specific Plan development. Included in the Geneva Avenue extension is a bridge over the Caltrain right-of-way.

Baylands Roadway Network

The Specific Plan organizes roadways within the Baylands using General Plan functional classifications with two additional classifications unique to the Baylands: green shared street and access road (see **Table 3-2** and **Figure 3-14**).

Table 3-2: Proposed Baylands Roadway Network

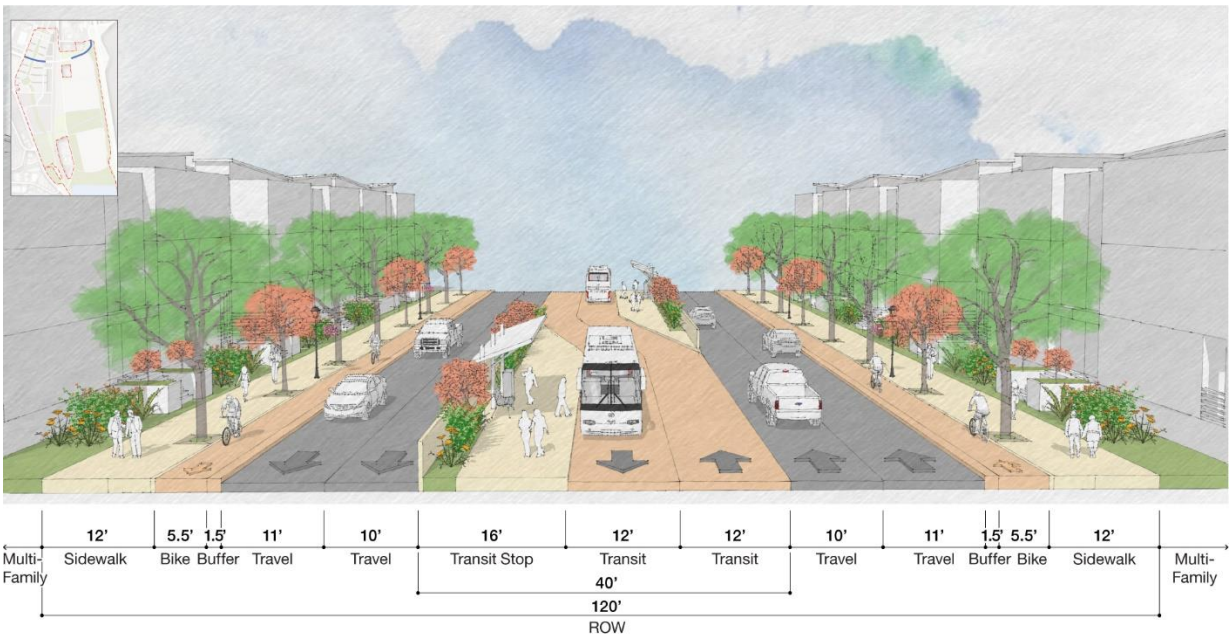
Street Name	Functional Classification	Description
Geneva Avenue	Regional Arterial	Geneva Avenue is proposed to be constructed and serve as the major gateway to the Baylands. Geneva Avenue would be extended from Bayshore Boulevard through the Baylands to Beatty Avenue/Alana Way, including a bridge over the existing Caltrain right-of-way. The new segment to be constructed as part of Baylands development includes sidewalks and protected bike facilities. Except for the bridge section, the Specific Plan proposes that Geneva Avenue be constructed with four travel lanes for automobiles and two dedicated lanes for bus rapid transit. The Specific Plan also indicates a four-lane section on the bridge, with buses sharing lanes with automobile traffic. Except for Tunnel Avenue and Frontage Road, roadways will intersect Geneva Avenue at grade. Tunnel Avenue and Frontage Road will pass under the Geneva Avenue Bridge. Proposed Geneva Avenue cross-sections are illustrated in **Figure 3-15**.
Sierra Point Parkway	Minor Arterial	Sierra Point Parkway, which runs along the eastern edge of Baylands adjacent to US 101, will be extended from its existing terminus at Lagoon Road north to Geneva Avenue and serve as a primary access for vehicles coming to and from US 101 in the Campus East District. As shown in **Figure 3-16**, Sierra Point Parkway improvements include extension of the Bay Trail through the Baylands as an adjacent separated shared use path for people walking and biking. The path is proposed to be separated from traffic with a painted buffer and flexi-posts. The vehicular travel lanes will be striped to shift east where needed with a reduced east side shoulder to accommodate the facility within the existing right-of-way.
Tunnel Avenue	Minor Arterial	Tunnel Avenue will be improved roughly along its current alignment, providing access to the Bayshore Caltrain station. A sidewalk is proposed on one side of the street with protected bicycle lanes proposed along both sides of the street. The Tunnel Avenue cross-section is illustrated in **Figure 3-17**.
Lagoon Road	Minor Arterial	Lagoon Road will be realigned to provide direct access to the existing southbound US 101 freeway on- and off-ramps. An adjacent separated multi-use path for people walking and biking is proposed along Lagoon Road. The Lagoon Road cross-section is illustrated in **Figure 3-18**.
Sunnydale Avenue	Collector	The existing Sunnydale Avenue will be extended into the Baylands and serve as the community's gateway from the Visitacion Valley neighborhood in San Francisco. Sidewalks and a protected bicycle lane are proposed along both sides of the street. The Sunnydale Avenue cross-section is illustrated in **Figure 3-19**.
Baylands Boulevard	Collector	Baylands Boulevard will serve denser residential and commercial office uses and will function as the main shuttle spine for the western portion of the Baylands. Sidewalks and a protected bicycle lane are proposed along both sides of the street. The Baylands Boulevard cross-section is illustrated in **Figure 3-20**.
Main Street	Collector	Main Street will be extended into the Baylands to provide access to residential areas to the north and commercial uses within the Icehouse Hill District to the south. Sidewalks and a protected bicycle lane are proposed along both sides of the street. The Main Street cross-section is illustrated in **Figure 3-21**.

Street Name	Functional Classification	Description
Campus Parkway	Collector	Connecting Bayshore Boulevard to Frontage Road along the Caltrain right-of-way, Campus Parkway will provide access for people within the Icehouse Hill District. Sidewalks and a protected bicycle lane are proposed along both sides of the street. The Campus Parkway cross-section is illustrated in **Figure 3-22**.
Frontage Road	Collector	Frontage Road's primary function is to provide access to parking and services within residential and office towers along the west side of the Caltrain right-of-way. The Frontage Road cross-section is illustrated in **Figure 3-23**.
East Campus Road	Collector	East Campus Road will provide internal circulation in the Campus East District and includes sidewalks and protected bike facilities. The East Campus Road cross-section is illustrated in **Figure 3-24**.
East Park Street West Park Street	Local	This couplet of one-way streets along each side of Baylands Park form the primary north–south vehicular axis that will connect the Bayshore and Roundhouse districts. The couplet is proposed to provide a sidewalk and bicycle facilities along both sides of Baylands Park south to Roundhouse Circle. The couplet would also provide access to public open spaces and residential areas. East Park Boulevard and West Park Boulevard cross-sections are illustrated in **Figure 3-25**.
Roundhouse Circle	Local	Roundhouse Circle would connect to the Park Street couplet, North Main Street, and other streets in the Roundhouse District. Its shape forms Roundhouse Park within which the Roundhouse is located. A sidewalk and protected bicycle lane are proposed along the outside of the traffic circle. The Roundhouse Circle cross-section is illustrated in **Figure 3-26**.
Visitacion Creek North	Local	Visitacion Creek North provides internal circulation within the Campus East District and includes an adjacent separated shared use path for people walking and biking. The Visitacion Creek North cross-section is illustrated in **Figure 3-27**.
Visitacion Creek South	Local	Visitacion Creek South provides internal circulation in the Campus East District, including an adjacent separated shared use path for people walking and biking. The Visitacion Creek South cross-section is illustrated in **Figure 3-27**.
Various	Local Streets	Residential streets in the Roundhouse and Bayshore districts have been designed for low-speed travel. In addition to two, 10-foot wide travel lanes, local streets are proposed to provide a 12-foot sidewalk, including a 7-foot pedestrian through zone (including a minimum 5-foot wide travel path) and a 5-foot furnishing zone along both sides of the street. The cross-section for Local Streets is illustrated in **Figure 3-28**.
Various	Green Shared Streets	Green Shared Streets provide direct access to residential areas. They are proposed as shared streets that provide for pedestrians, bicyclists, and vehicular movement. They are designed with a curbless cross-section, street furnishings, and traffic calming measures. Cross-sections for Green Shared Streets are illustrated in **Figure 3-29**.
Access Road	Access Road	Access Road provides access to parking and services between Frontage Road and Campus Parkway north of Icehouse Hill.

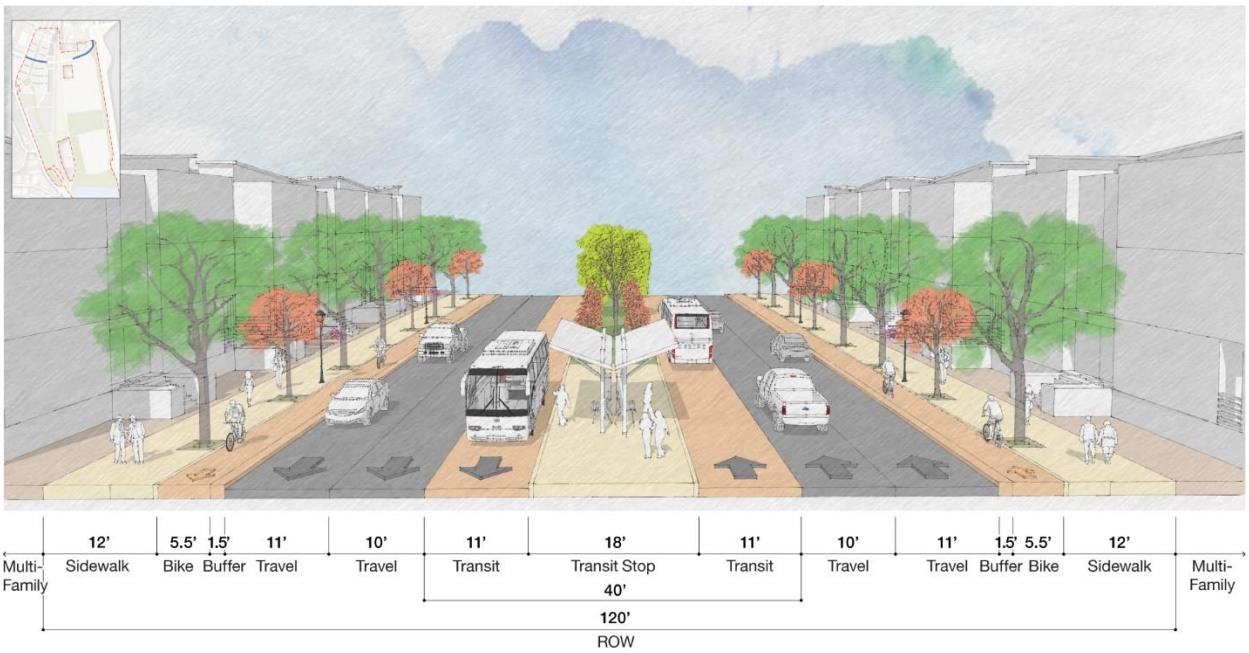
SOURCE: The Baylands Specific Plan, 2025.

Figure 3-14: Proposed Baylands Street Network

Figure 3-15a: Geneva Avenue Cross-Sections

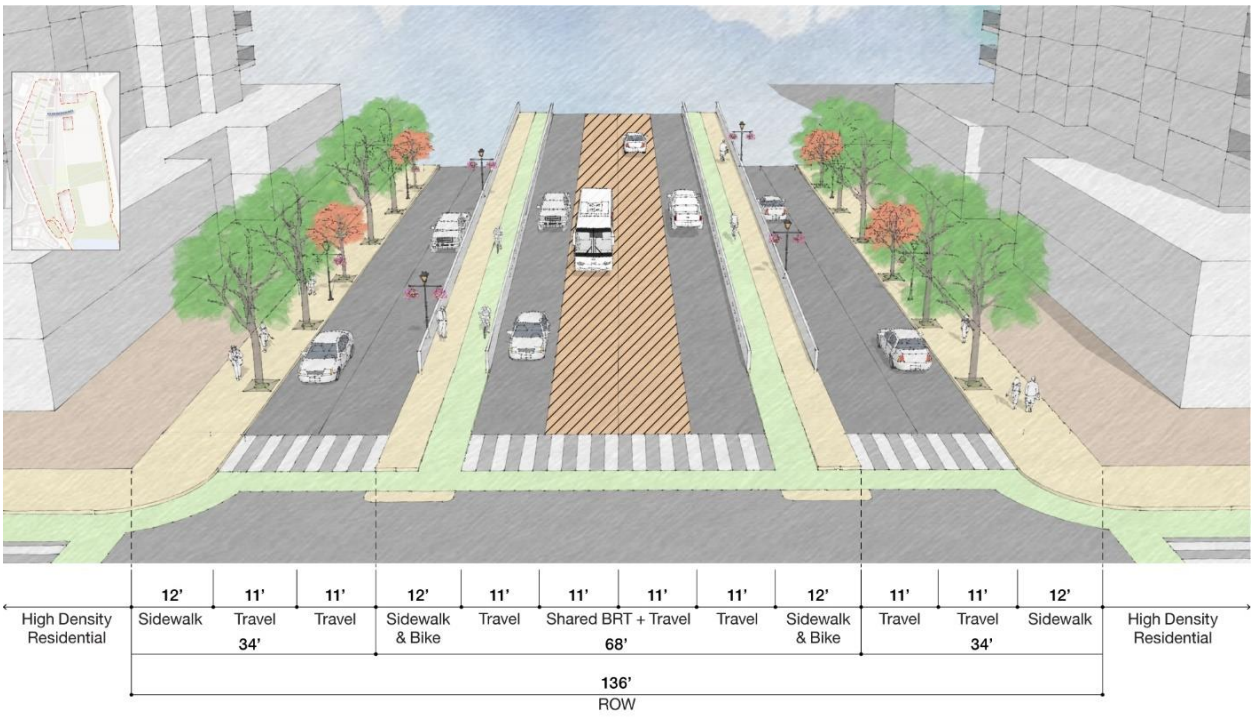


GENEVA AVENUE WITH SIDE BOARDING BRT

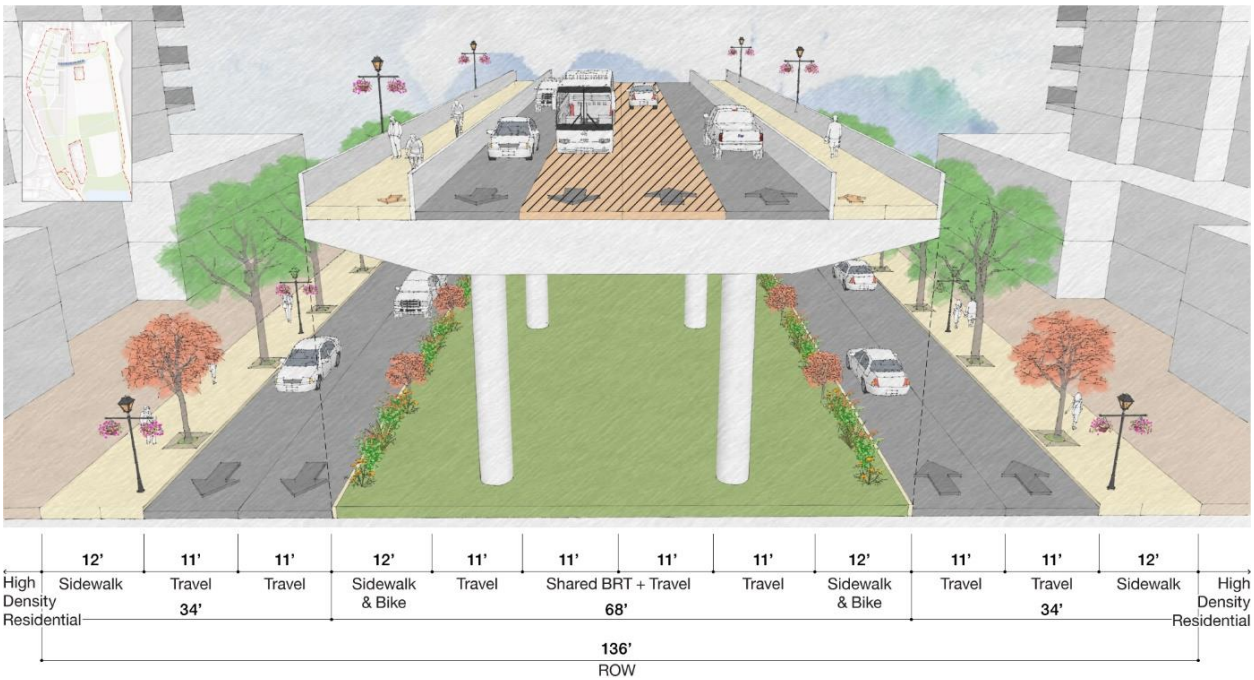


GENEVA AVENUE WITH CENTER BOARDING BRT

Figure 3-15b: Geneva Avenue Cross-Sections



GENEVA AVENUE BRIDGE APPROACH AND FRONTAGE ROADS



GENEVA AVENUE BRIDGE AND FRONTAGE ROADS

Figure 3-16: Sierra Point Parkway Proposed Cross-Section

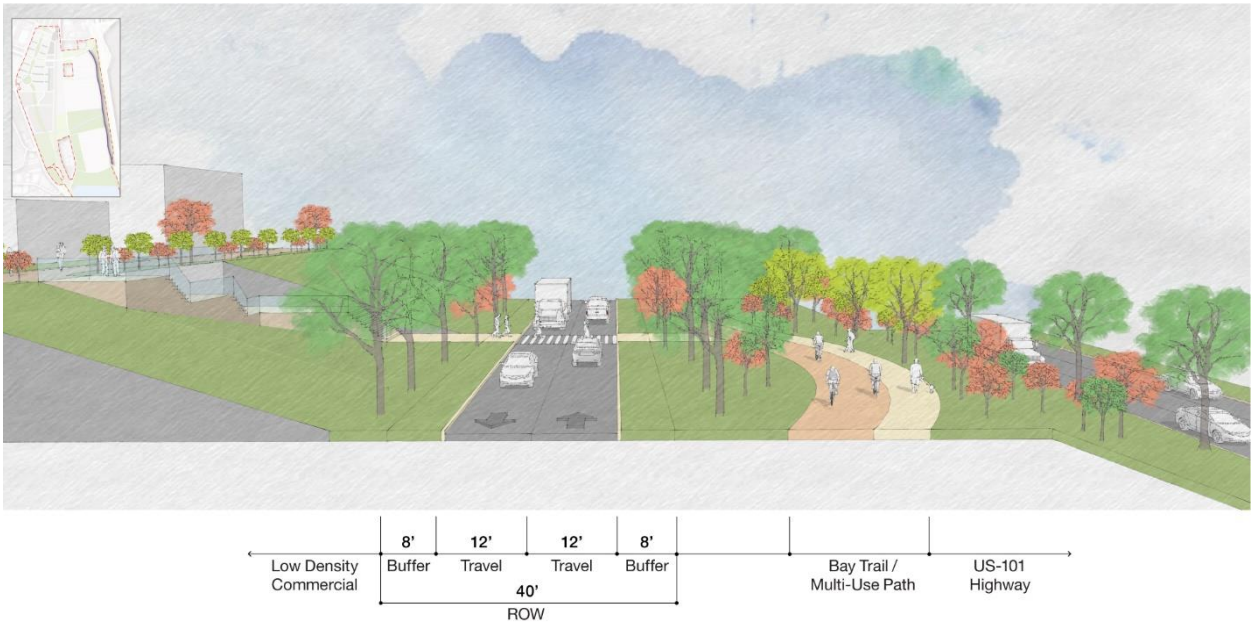


Figure 3-17: Tunnel Avenue Proposed Cross-Section

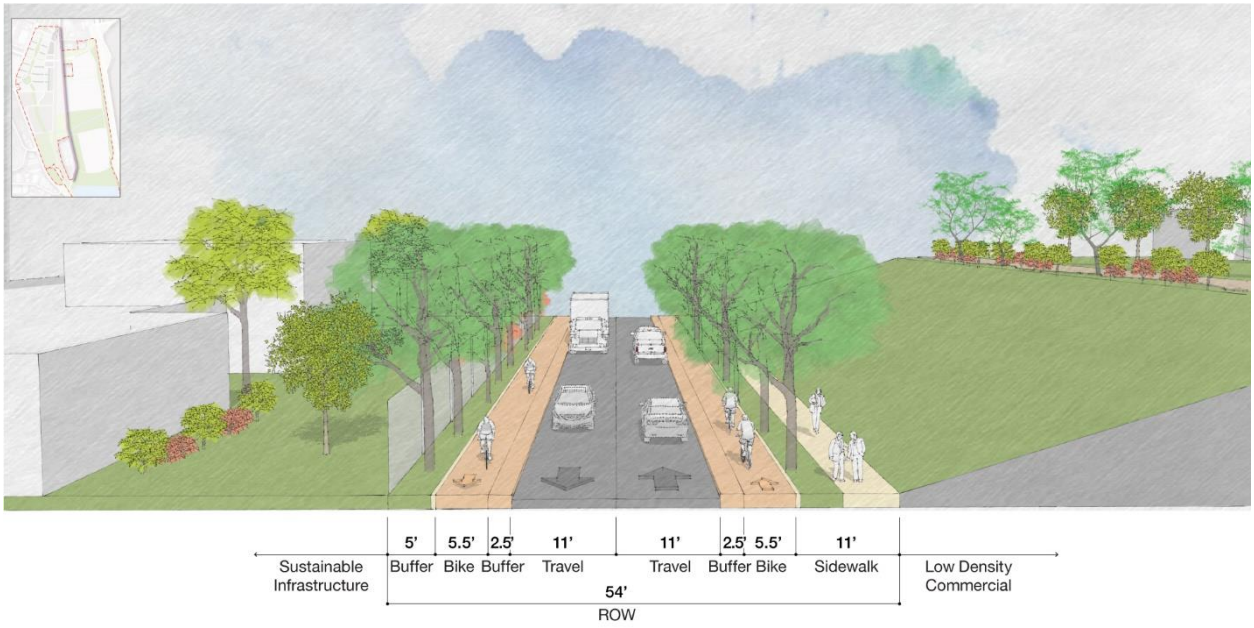


Figure 3-18: Lagoon Road Proposed Cross-Section

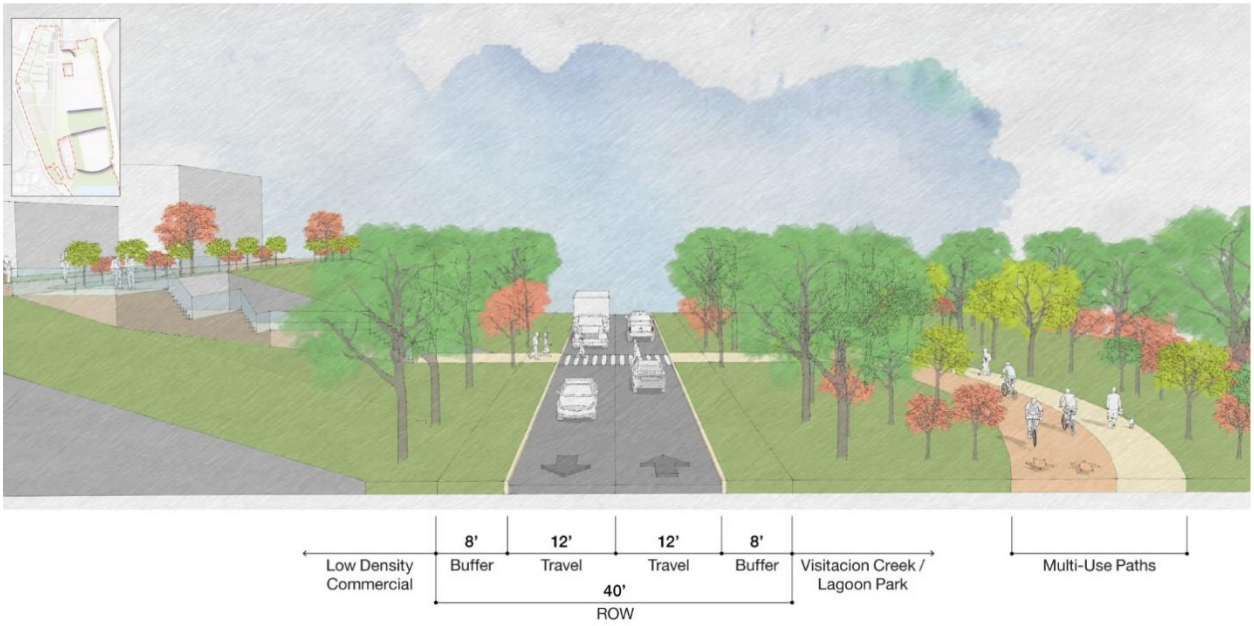


Figure 3-19: Sunnydale Avenue Proposed Cross-Section

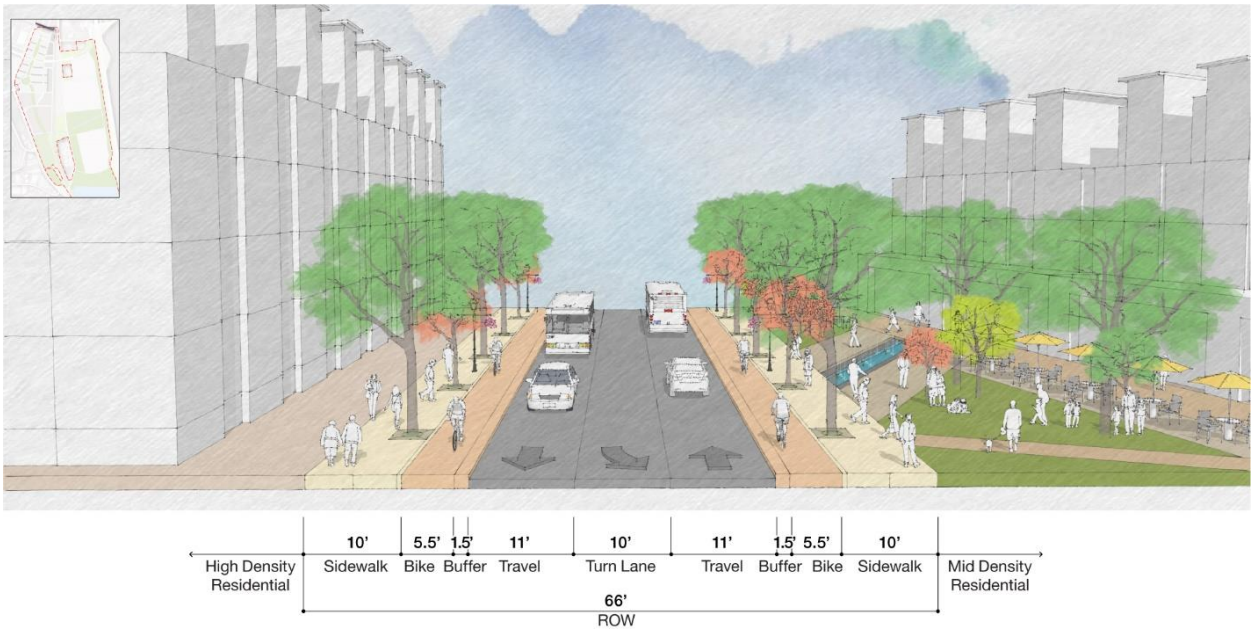
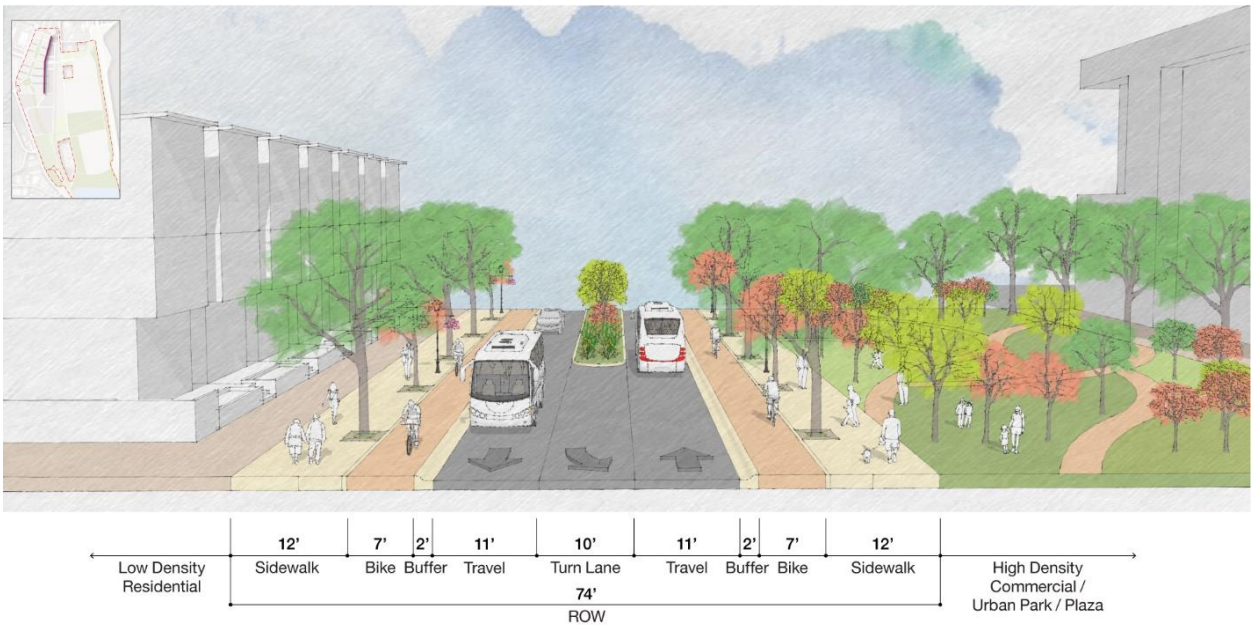
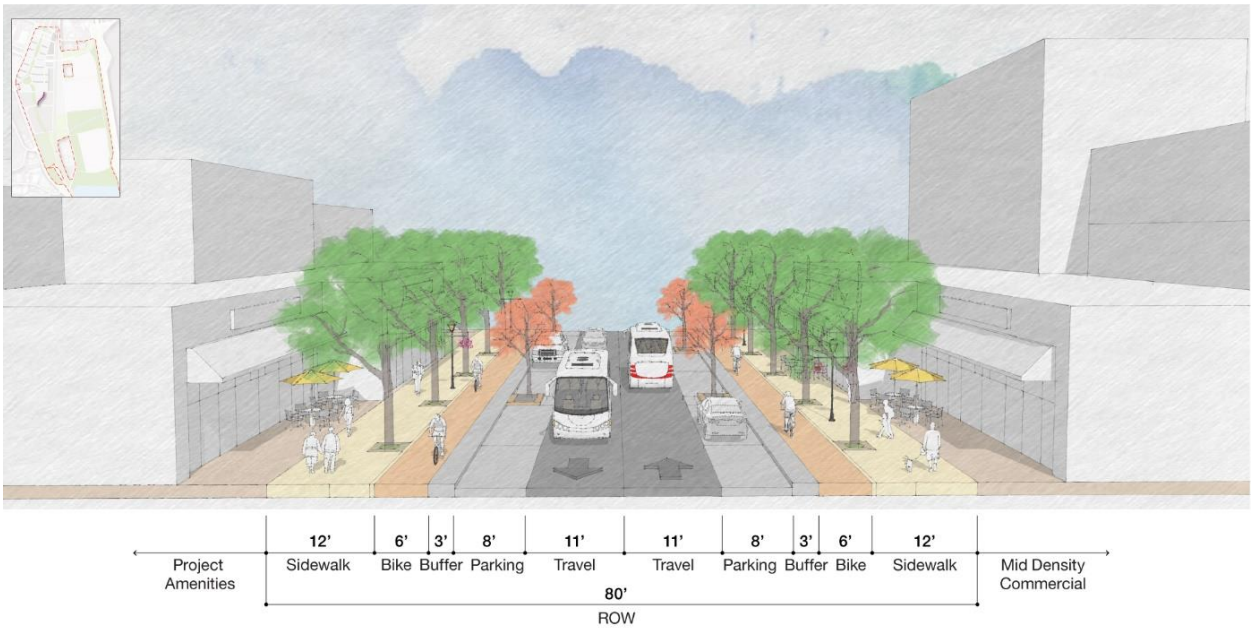


Figure 3-20: Baylands Boulevard Cross Sections



BAYLANDS BOULEVARD NORTH OF MAIN STREET



BAYLANDS BOULEVARD SOUTH OF MAIN STREET

Figure 3-21: Main Street Proposed Cross-Section

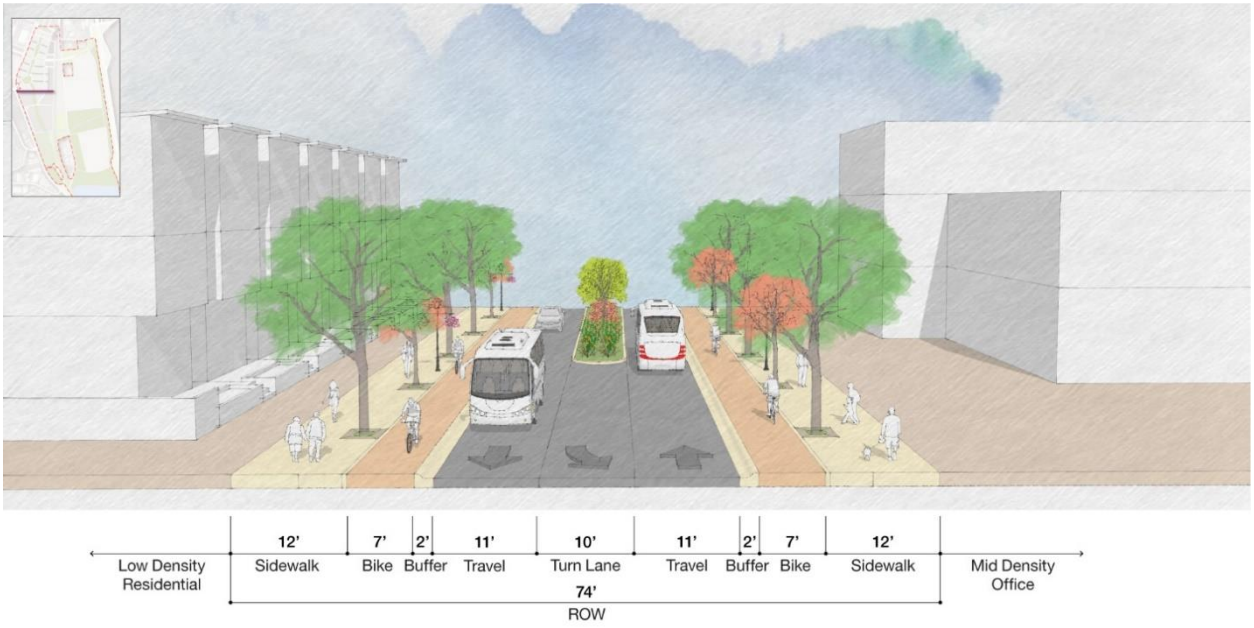


Figure 3-22: Campus Parkway Proposed Cross-Section

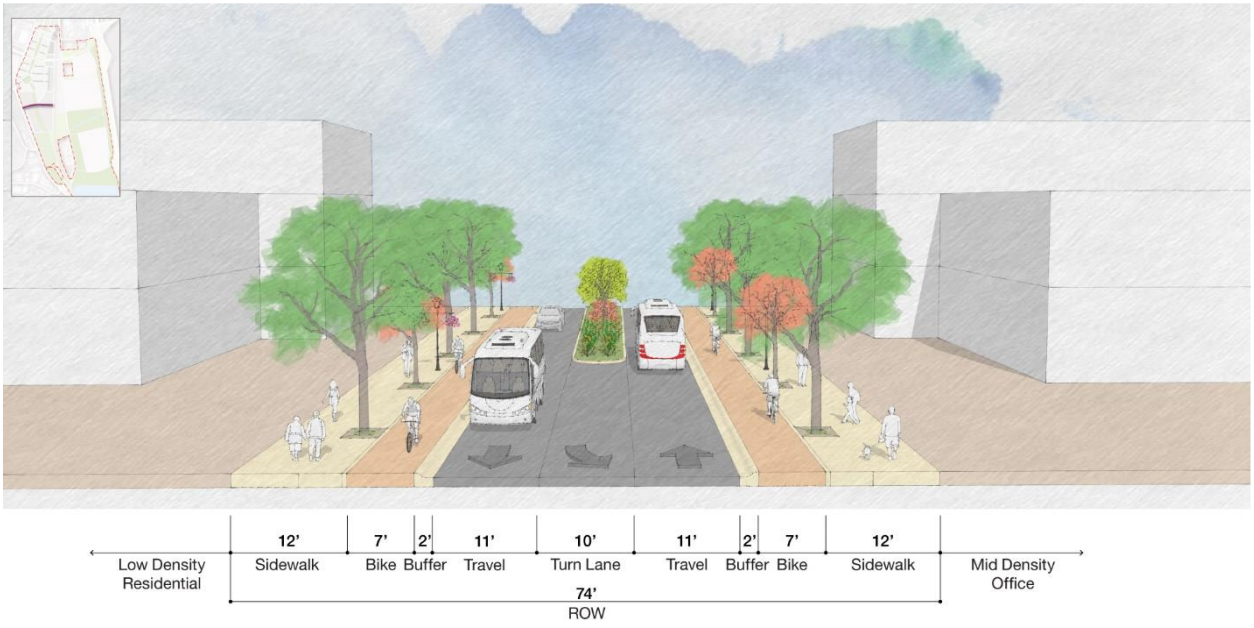


Figure 3-23: Frontage Road Proposed Cross-Section

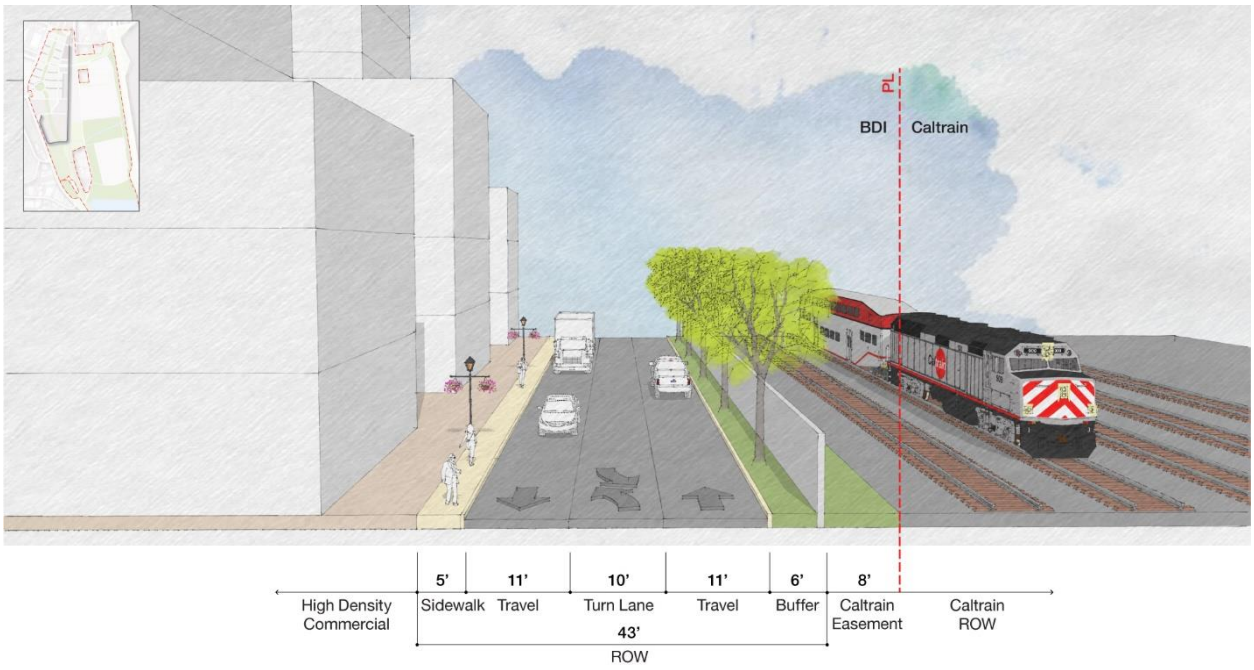


Figure 3-24: East Campus Road Proposed Cross-Section

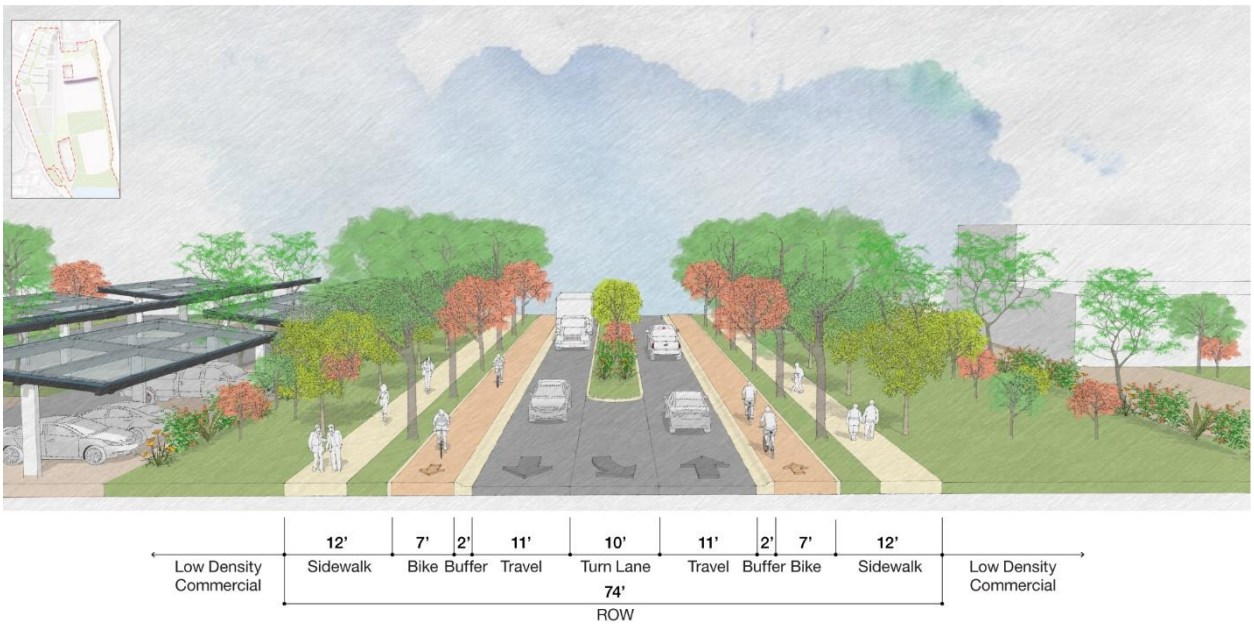


Figure 3-25: East Park Street and West Park Street Proposed Cross-Section

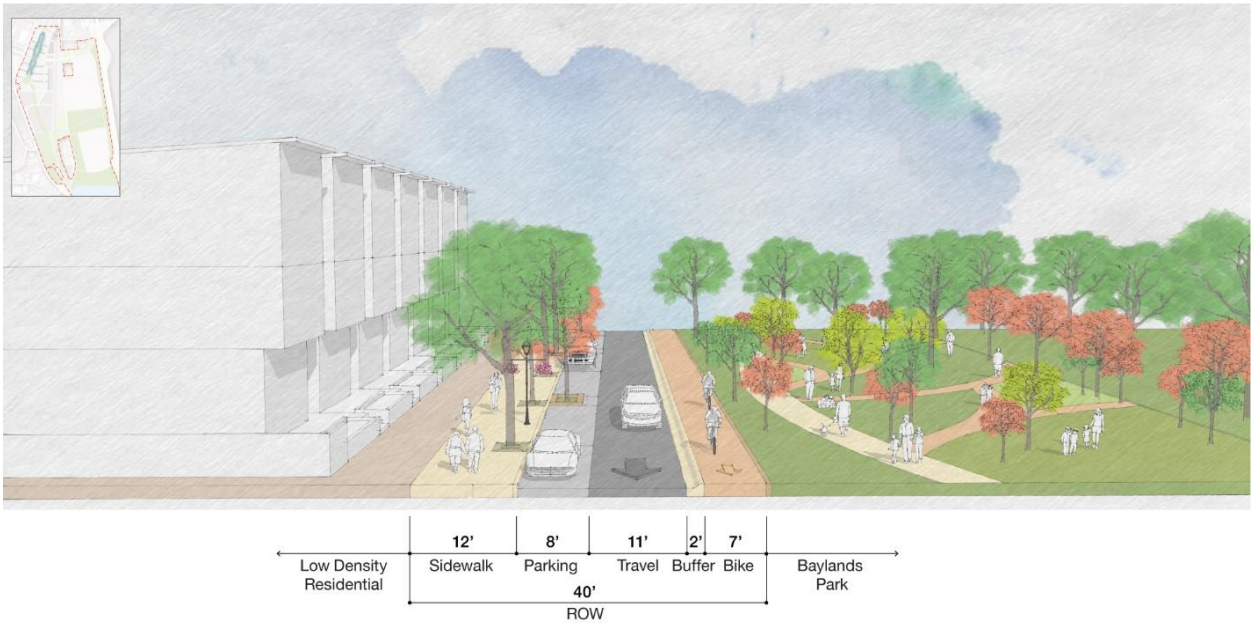


Figure 3-26: Roundhouse Circle Proposed Cross-Section

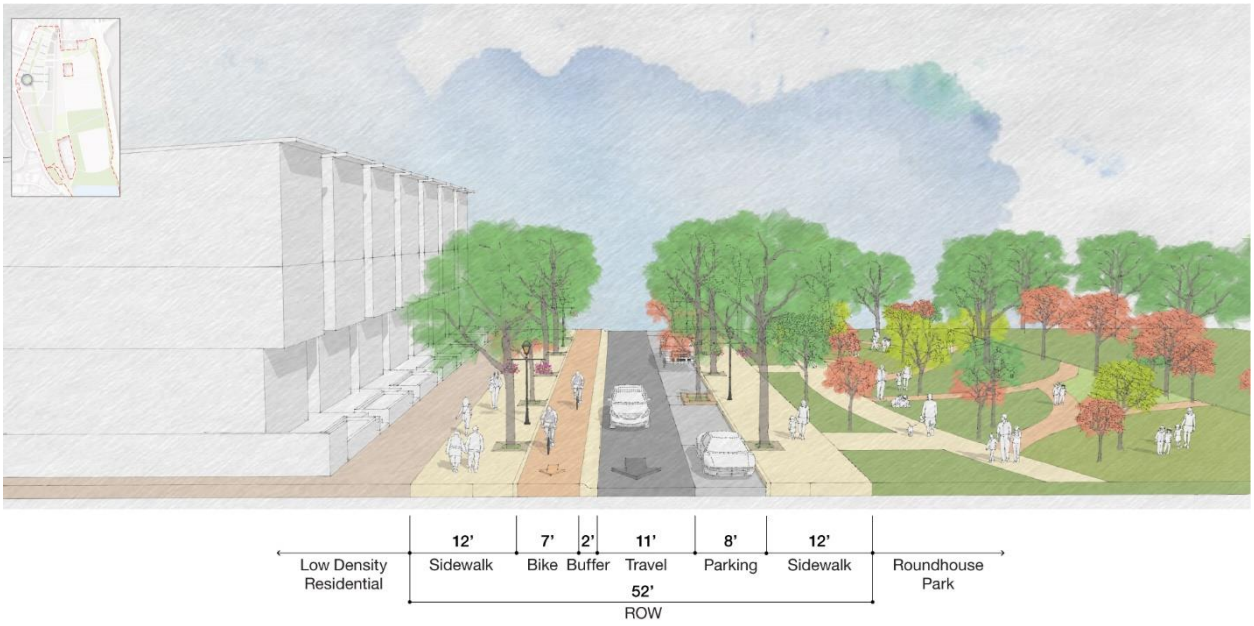


Figure 3-27: Visitacion Creek North and South Proposed Cross-Section

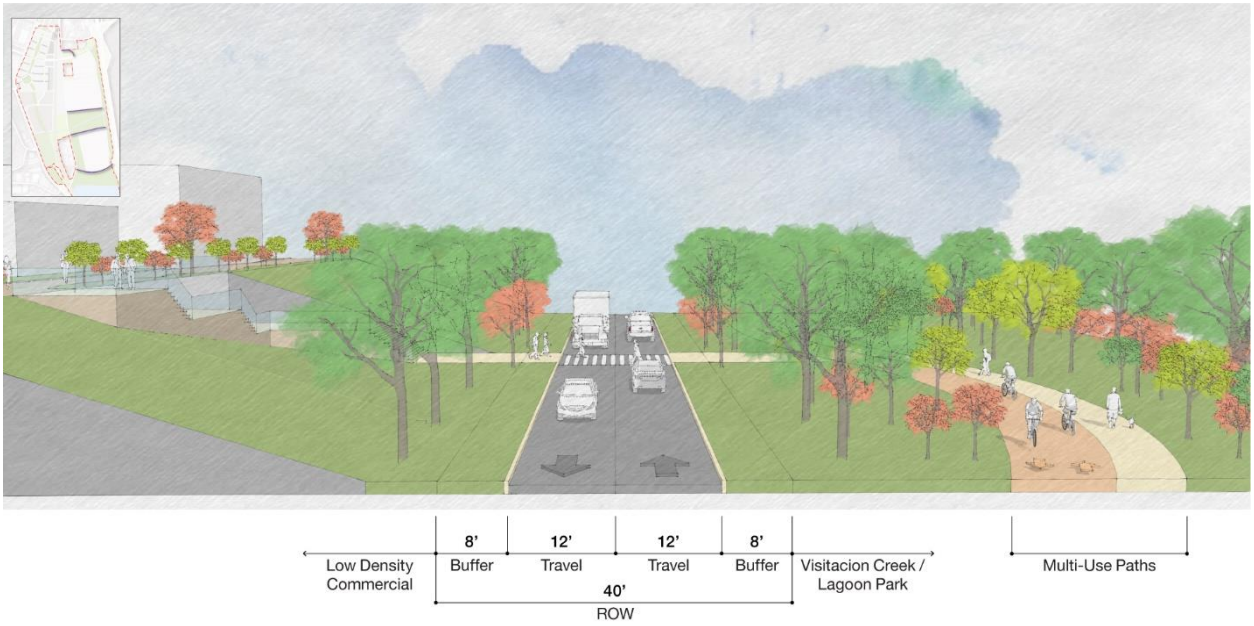


Figure 3-28: Local Streets Proposed Cross-Section

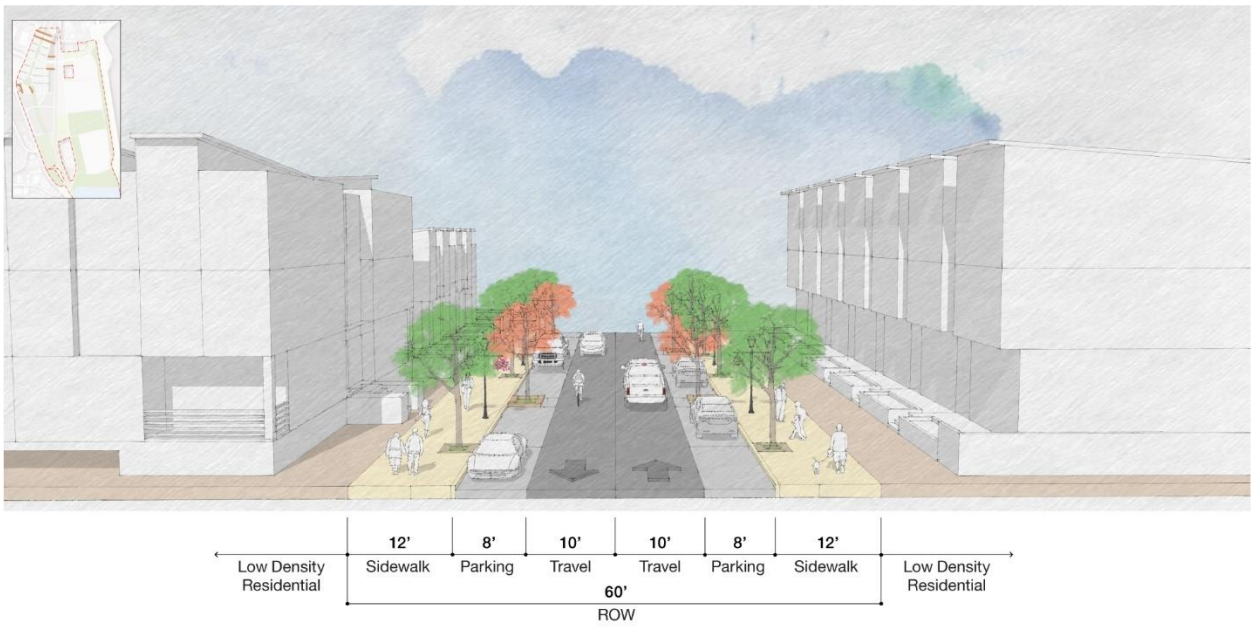
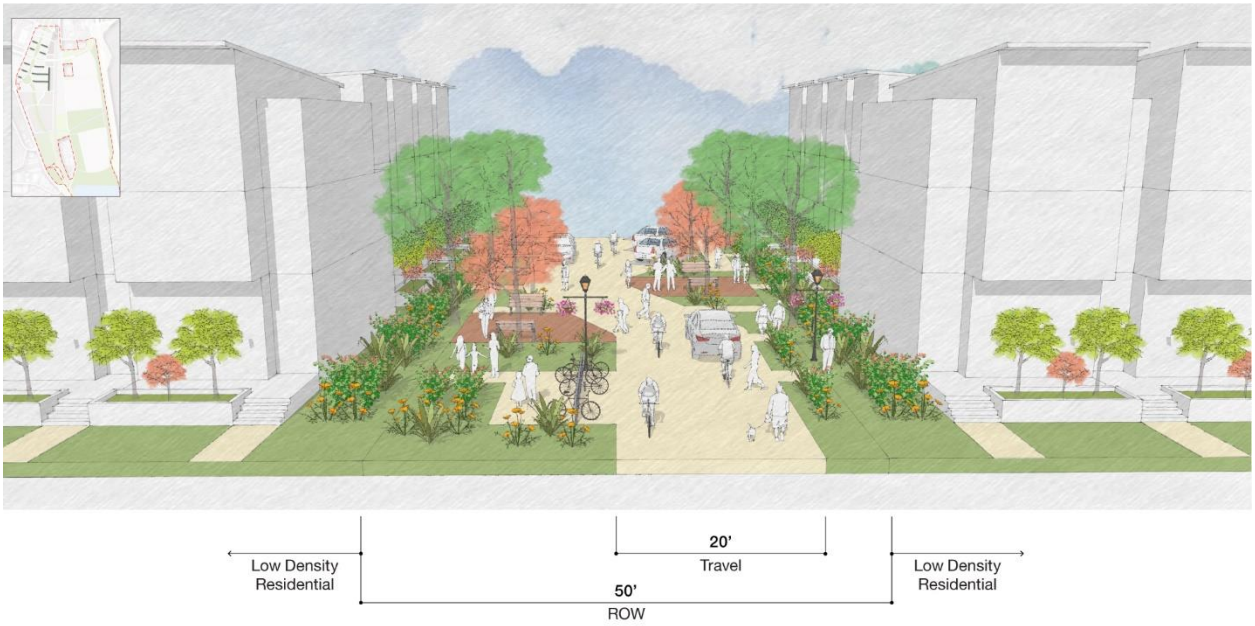
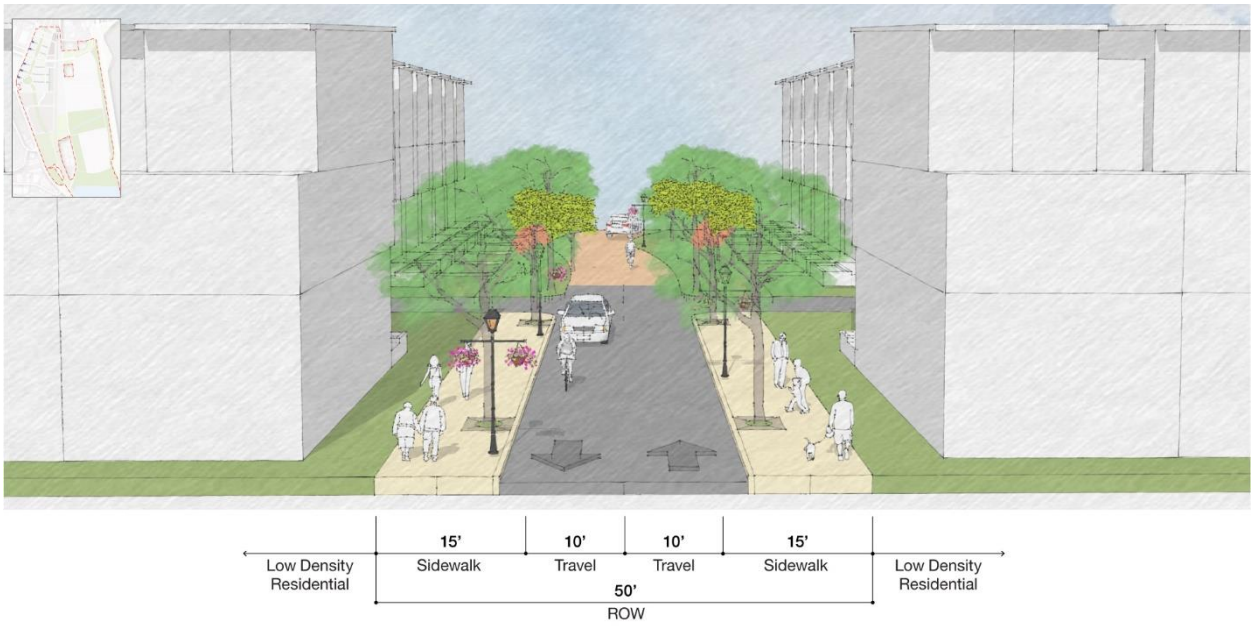


Figure 3-29: Green Shared Streets Proposed Cross Sections



GREEN SHARED STREET



GREEN SHARED STREET TRANSITIONS TO BAYSHORE BOULEVARD

Active Transportation Network

An active transportation network is proposed consisting of an internal network of shared use paths, bicycle facilities, and sidewalks compliant with the Americans with Disabilities Act (ADA) that will connect to existing local and regional routes.

Pedestrian System

Sidewalks or shared use paths will be provided adjacent to all Specific Plan area roadways. Planted curbside buffers and enhanced pedestrian crossings will also be provided at key intersections to provide additional comfort and safety, with features including curb extensions and leading pedestrian intervals. Curb extensions would extend the sidewalk into the curb lane at intersections or mid- block crossings, shortening crossing distances for people walking. Pedestrian facility types are described in **Table 3-3**. The proposed Baylands pedestrian network is illustrated in **Figure 3-30**.

Table 3-3: Baylands Pedestrian Network Improvements

Facility Type	Description	Location(s)
Sidewalk	A paved walkway adjacent to and separated by grade from a roadway. In compliance with the Americans with Disabilities Act (ADA), sidewalks will have a minimum 5-foot width. Sidewalks within the Baylands will provide additional width where needed for landscaping and other street furniture such as benches, streetlights, and bike racks, and may use decorative materials other than concrete subject to City approval as part of streetscape landscaping plans.	• Sunnydale Avenue • Baylands Boulevard • Bayshore Boulevard • Park Street East & West • Roundhouse Circle • Main Street • Geneva Avenue • Campus Parkway • East Campus Road • Tunnel Avenue • Frontage Road • Local Streets
Green Shared Street	A slow speed, curbless, and paved space intended to be shared by people walking, biking, and driving motor vehicles, with priority given to pedestrians and bicyclists.	Residential streets in the Bayshore and Roundhouse districts (see **Figure 3-30**).
Shared Use Path (Class I)	A paved path that is separated from roadways for use by pedestrians and bicyclists.	Along both sides of the Geneva Avenue bridge and adjacent to the following streets: • Sierra Point Parkway • Lagoon Road • Visitacion Creek North • Visitacion Creek South
Pedestrian Path	Pedestrian connections through open space areas that may be paved or unpaved.	Open space areas within the Baylands as described above in Section 3.3.2 d, *Open Space and Open Areas*.

SOURCE: The Baylands Specific Plan, 2025.

Figure 3-30: Baylands Pedestrian Network

Bicycle and Micro-Mobility System

Micro-Mobility

"Micro-mobility" refers to small, fully, or partially human-powered vehicles such as bicycles, e-bikes, and e-scooters.

A bicycle and micro-mobility network connecting each of the Baylands residential, commercial, and industrial areas to its open space network and the Bayshore Caltrain station will be provided. A comprehensive system of north–south and east–west on-street bicycle lanes and off-street bikeways are proposed for bicycle and micro-mobility travel throughout the Baylands, including protected bikeways that provide physical separation (vertically, horizontally, or both) from vehicular travel lanes. Connections to Brisbane's existing bike network will also be provided to facilitate connectivity between the existing community and the Bayshore Caltrain station. Baylands bicycle and micro-mobility facility types are identified in **Table 3-4** and illustrated in **Figure 3-31**.

Table 3-4: Baylands Bicycle and Micro-Mobility Network Improvements

Facility Type	Description	Location(s)

Class I Shared Use Path	A shared use path that is completely separated from the street with a limited number of street and driveway crossings. Class I Shared Use Paths are typically shared by bicyclists and pedestrians.	• Within the Ecological Park and on Icehouse Hill
		• Along both sides of the Geneva Avenue bridge
		• Adjacent to the following streets:
		  ○ Visitacion Creek North and South
		  ○ Lagoon Road
		  ○ Sierra Point Parkway (Bay Trail)

Class IV Protected Bike Lane	A bike lane that is separated from moving traffic vertically, horizontally, or both, with a minimum 1.5-foot buffer (3-feet adjacent to parking).	• Bayshore Boulevard (east side from Sunnydale Avenue to Main Street) • Sunnydale Avenue • Geneva Avenue • Roundhouse Circle • Main Street • Campus Parkway • Park Street East and West • Baylands Boulevard • Tunnel Avenue • East Campus Road
Green Shared Street	A slow speed, curbless, and paved space intended to be shared by people walking, biking, and driving motor vehicles, with priority given to pedestrians and bicyclists.	• Residential streets in the Bayshore and Roundhouse districts

SOURCE: The Baylands Specific Plan, 2025.

Transit

Regional Transit Systems Serving the Baylands

The Bayshore Caltrain Station will continue serving as the primary transit facility for uses within and near the Baylands. All of the Specific Plan area's 2,200 dwelling units and approximately 80 percent of the site's employment-generating uses are located within a ½-mile walk of the Bayshore Station or a SamTrans bus, Muni bus, or Muni light rail transit stop. The remaining 20 percent of the Specific Plan area's commercial square footage is proposed to be located within a ¼-mile walk of a Baylands Shuttle stop.

Figure 3-31: Baylands Bicycle and Micro-Mobility Network

Baylands Shuttle Routes

A fare-free shuttle network is proposed to be provided to transport Baylands residents and workers throughout the site and connect the Baylands to downtown Brisbane and existing transit routes. Shuttle service is proposed to be established in two phases, initially providing an internal Baylands route and weekday connections to downtown Brisbane as illustrated in **Table 3-5** and **Figure 3-32**.

Table 3-5: Proposed Baylands Shuttle Service and Phasing

Shuttle Route	Weekday Service	Weekend Service	Service to be Established Prior to:
Phase 1			
Baylands Internal Route	6:00 a.m.–8:00 p.m. Maximum 15-minute headways	10:00 a.m.–5:00 p.m. On-demand service (Fixed-route service dependent on demand)	Prior to 50% occupancy of any Baylands Specific Plan area district
Baylands-Downtown Route	6:00 a.m.–9:00 a.m. 4:00 p.m.–6:00 p.m. 1-hour headways	No Service	Prior to 50% occupancy of any Baylands Specific Plan area district
Phase 2			
East Side Route	6:00 a.m.–9:00 a.m. 4:00 p.m.–6:00 p.m. 1-hour headways	10:00 a.m.–5:00 p.m. On-demand service (Fixed-route service dependent on demand)	Prior to 50% occupancy of Campus East District

SOURCE: The Baylands Specific Plan, 2025.

Transportation Demand Management

In addition to providing a proposed roadway network, pedestrian and bicycle facilities, and transit services described above, the Specific Plan proposes preparation of Transportation Demand Management (TDM) Plans for each applicable site-specific development project as it undergoes site-specific development review. The purpose of these TDM plans is to encourage and incentivize travel other than via use of single-occupant vehicle trips in accordance with San Mateo County and City of Brisbane Transportation Demand Management requirements.[57] Transportation Demand Management strategies include:

- Transit Measures
    - Shuttle program connecting Specific Plan area locations to each other (see **Figure 3-31** and **Table 3-5**).
    - Transit incentives such as marketing or transit pass subsidies.

[57] Current TDM requirements focus on implementation by users and require new development expected to generate more than 100 peak hour trips to incorporate TDM measures that reduce the project's net vehicular trip generation.

Figure 3-32: Proposed Shuttle Routes and Transit Connections

- Active Transportation Facilities
    - Pedestrian and bicycle facilities.
    - Bicycle parking.
- Parking Strategies
    - Parking management, such as maximum parking ratios and unbundling parking from land uses.
- Other TDM strategies required by the City of Brisbane or C/CAG.

f. Habitat Conservation, Restoration, and Enhancement

Open space areas for preservation and enhancement of important habitat areas include four ecological greenspaces: the Brisbane Lagoon and Lagoon Park, Visitacion Creek, Icehouse Hill, and the Ecological Park. In addition to habitat preservation and enhancement, the areas provide site drainage and water quality treatment functions, as well as public access to recreation within natural settings.

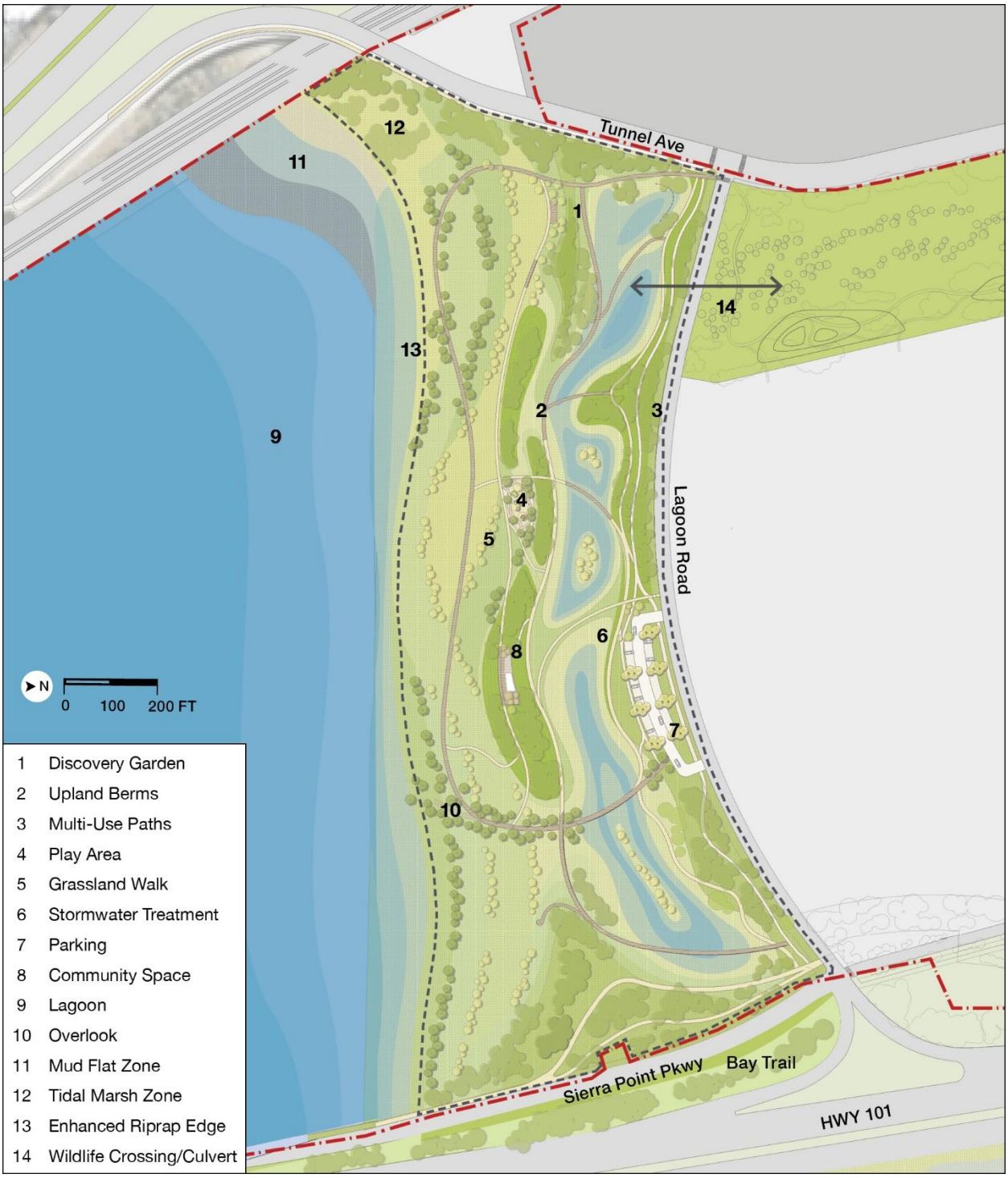
Brisbane Lagoon (147.8 acres) and Lagoon Park (15.4 acres)

The existing east–west alignment of Lagoon Road is proposed to be relocated to the north to provide a 31.7-acre area along the north side of the 121.8-acre Brisbane Lagoon for development of Lagoon Park (see **Figure 3-33**). As a result of sea level rise, Brisbane Lagoon is expected to expand to 137.8 acres by the Year 2100, leaving 15.4 acres of land area within Lagoon Park. The design of Lagoon Park provides for the protection and enhancement of biological resources along with compatible recreational activities such as outdoor education and wildlife observation. The park will include multi-use paths, a native plants discovery garden, play area, community space, and educational signage. Uses that promote large gathering and/or excessive noise will be prohibited within 50 feet of designated habitat areas. Night lighting will be provided for a parking area, along with low-level lighting for paths.

Proposed habitat restoration and enhancement includes:

- **Tidal flats** to be planted with eelgrass designed to attract birds such as heron, plover, and egret, as well as fish when the flats are submerged.
- **Tidal marsh** located just upslope of tidal flats. The design of tidal marsh areas provides greater native plant diversity than tidal flats with California cordgrass, pickleweed, saltgrass, and woody saltwort.
- **Grassland** that would provide a naturalized herbaceous assemblage would include an assortment of grasses and wildflowers. Example plant species are Junegrass, purple needlegrass, California melic, lupines, Indian paintbrush, and Douglas iris.

Figure 3-33: Lagoon Park Illustrative Concept Diagram



- **Coastal scrub** is proposed to be defined by its low-growing woody species such as coyotebrush, snowberry, and wax myrtle, and associated herbaceous species such as lupine, lizard's tail, and western swordfern.

Lagoon Park improvements would follow completion of Title 27 landfill closure activities, which would remove existing vegetation for placement of an impermeable landfill cap over the existing refuse layer along with landfill gas and leachate control systems. The existing east–west alignment of Lagoon Road is proposed to be relocated to the north to align with the US 101 freeway on- and off-ramps as well as to protect the roadway from projected sea level rise through 2100.

Specific Plan Figure 5.3.4 designates the tidal flats area shown in **Figure 3-34** as "Open Area Protection" for their preservation and protection. Ground disturbance north of the "tidal flats" up to the relocated Lagoon Road is required for restoration and enhancement of existing habitat and stormwater features. Overall, physical improvements in this area are proposed to remain largely naturalized but also include amenities that provide educational/recreational community spaces and means for accessibility as indicated in **Figure 3-33**, Lagoon Park Illustrative Concept Diagram. Park amenities include at-grade walks and bikeways, an elevated walk, wildlife observation areas, gardens, play spaces, picnic areas, and limited parking.

Figure 3-34: Biotic Habitat Zones within and adjacent to the Brisbane Lagoon

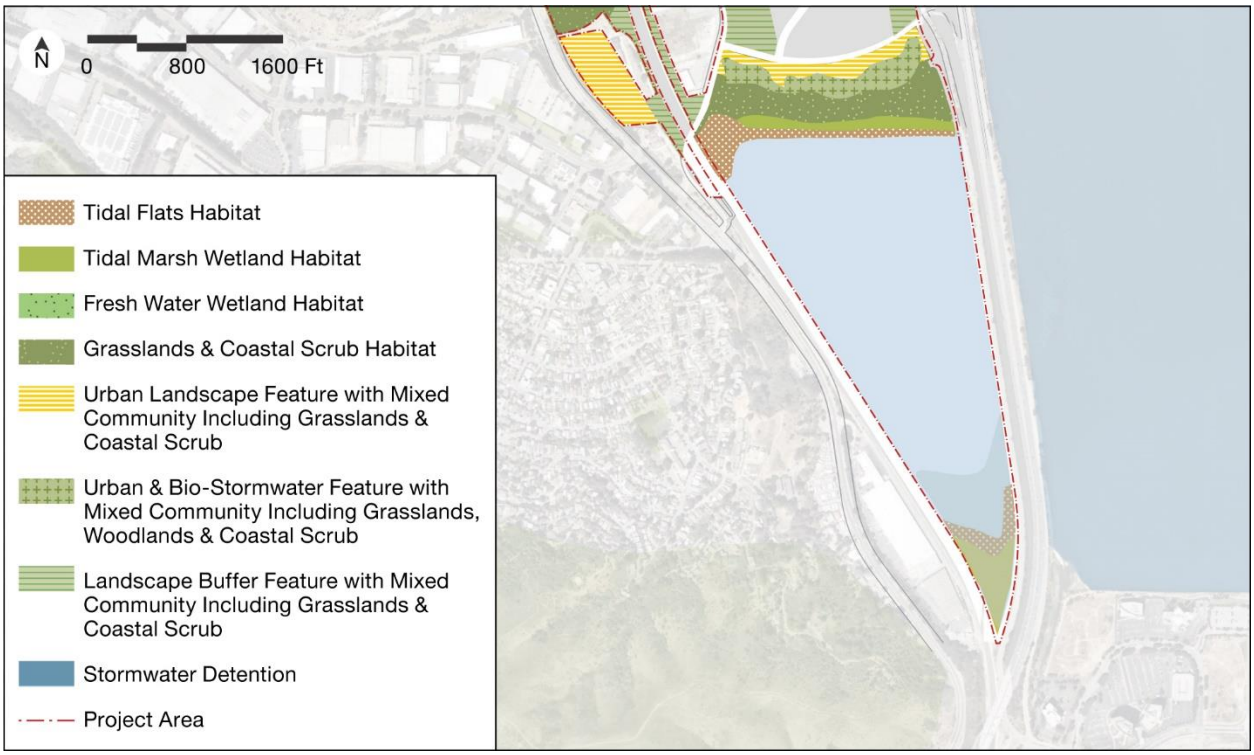
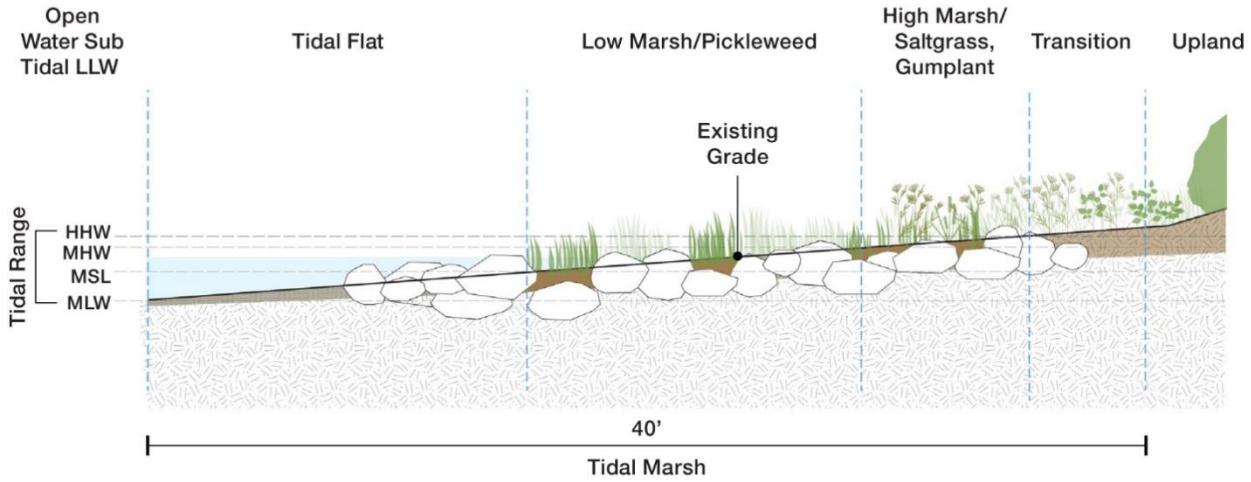


Figure 3-35a: Existing Lagoon Edge

As shown in **Figure 3-35a**, the existing northerly edge of the Brisbane Lagoon is lined with riprap. The Specific Plan proposes improving and restoring habitat along this edge. If permitted by regulatory agencies, existing riprap edges along the northern shoreline of the Brisbane Lagoon is proposed to be enhanced by infilling voids with soil, without raising the elevation, and interplanting with tidal wetland vegetation (see **Figure 3-35b**). This would include re-structuring the rocks and infill with the appropriate substrate (matching soil organic matter and grain size from reference marshes and/or using appropriate dredged material) to allow for tidal action and to promote the growth and establishment of pickleweed and saltgrass toward the upland transition. Construction of the enhanced lagoon edge is proposed to be undertaken in sections with the establishment of silt curtains, floating sediment booms protecting the lagoon while leveraging the total height of the tidal range. The use of coir erosion control fabric during plant establishment would be required to protect newly established plants and accrete sediment.

Figure 3-35b: Proposed Lagoon Edge Enhancement



Visitacion Creek (30.8 acres)

The tidally influenced Visitacion Creek is connected directly to San Francisco Bay through a culvert beneath US 101. Immediately upstream of the Specific Plan area's eastern boundary, Visitacion Creek's tidally influenced channel is proposed to be widened to rehabilitate its ecological functions, including on-site wetland creation featuring an enhanced tidal channel and restored salt marsh, native scrub, and grasslands, along with freshwater seasonal wetlands. Approximately 39.3 acres of land area are proposed for Visitacion Creek, 8.5 acres of which

would be subject to daily inundation due to sea level rise by the Year 2100, leaving 30.8 acres of land within this open space area.

East of the Caltrain right-of-way, Visitacion Creek is situated over an existing refuse layer that will be capped as part of the required Title 27 closure of the former Brisbane Landfill. The Specific Plan proposes erosion control and water pollution control measures to be implemented along with an ongoing maintenance plan to protect water quality.

Following landfill remediation, on-site wetland creation featuring an enhanced tidal channel and restored salt marsh, native scrub and grasslands, and freshwater seasonal wetlands is proposed. Above Visitacion Creek, freshwater seasonal wetland areas would also be established. The space allocated for these systems would allow the migration of the adjacent tidal wetlands as sea level rise occurs.

Under-road wildlife connections are proposed at Tunnel Avenue, Visitacion Creek Road North, and Sierra Point Parkway (see **Figure 3-36a** through **Figure 3-36e**), in the form of a small culvert or clear span bridge, sized appropriately for small terrestrial fauna to traverse between local and regional habitat patches. The under-road wildlife connection provided at Sierra Point Parkway and the Bay Trail is proposed to consist of a clear span bridge replacing the existing culvert.

Figure 3-36a: Visitacion Creek Illustrative Concept Diagram

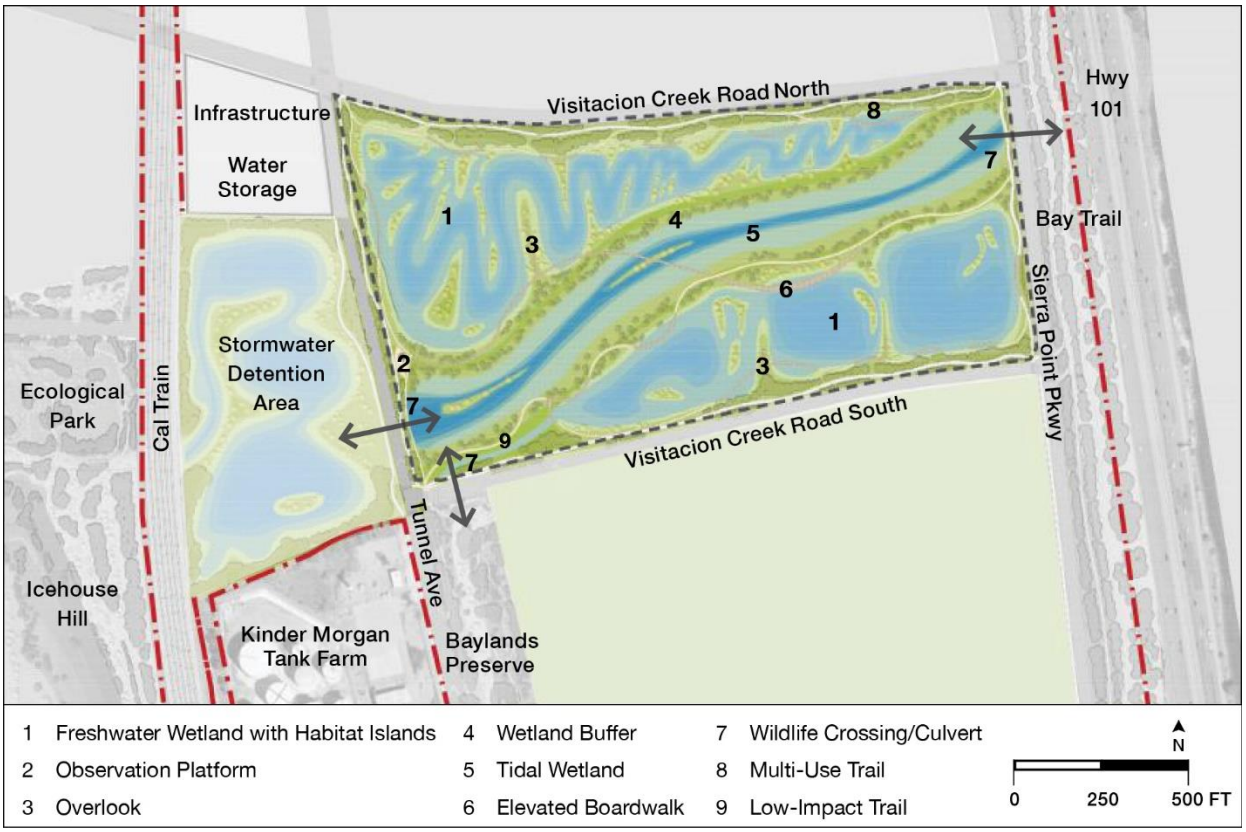
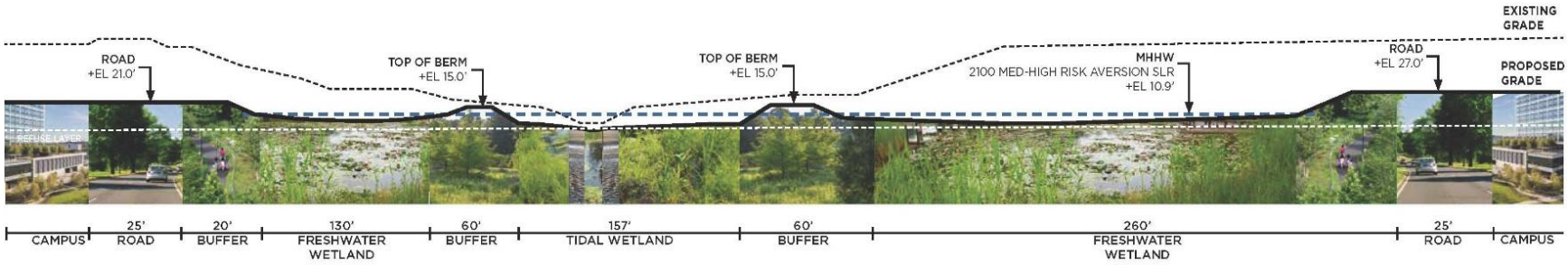


Figure 3-36b: Visitacion Creek Section A-A'



VISITACION CREEK SECTION A-A'

NOTES: Elevations shown are based on the NAVD 88 vertical datum.

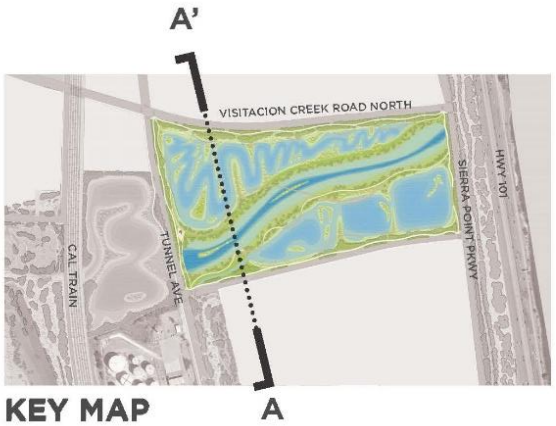
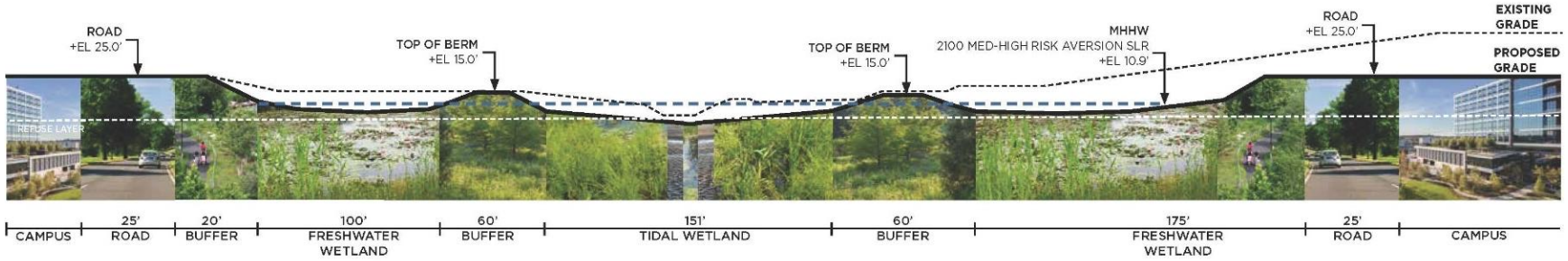
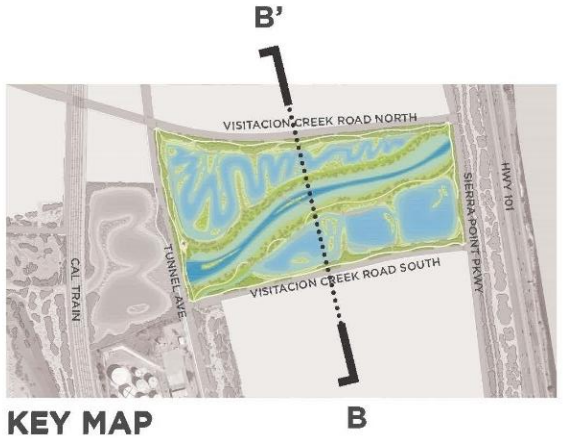


Figure 3-36c: Visitacion Creek Section B-B'

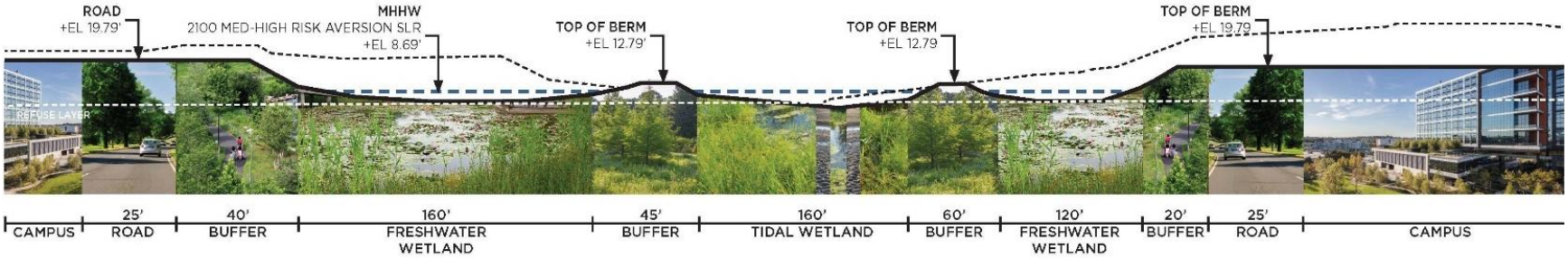


VISITACION CREEK SECTION B-B'



KEY MAP

Figure 3-36d: Visitacion Creek Section C-C'



VISITACION CREEK SECTION C-C'

NOTES: Elevations shown are based on the NAVD 88 vertical datum.

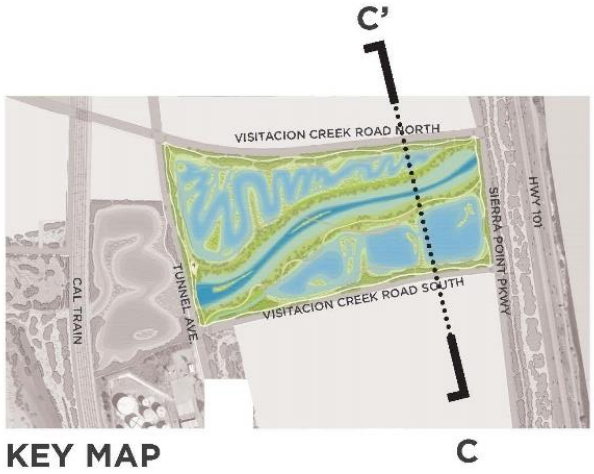
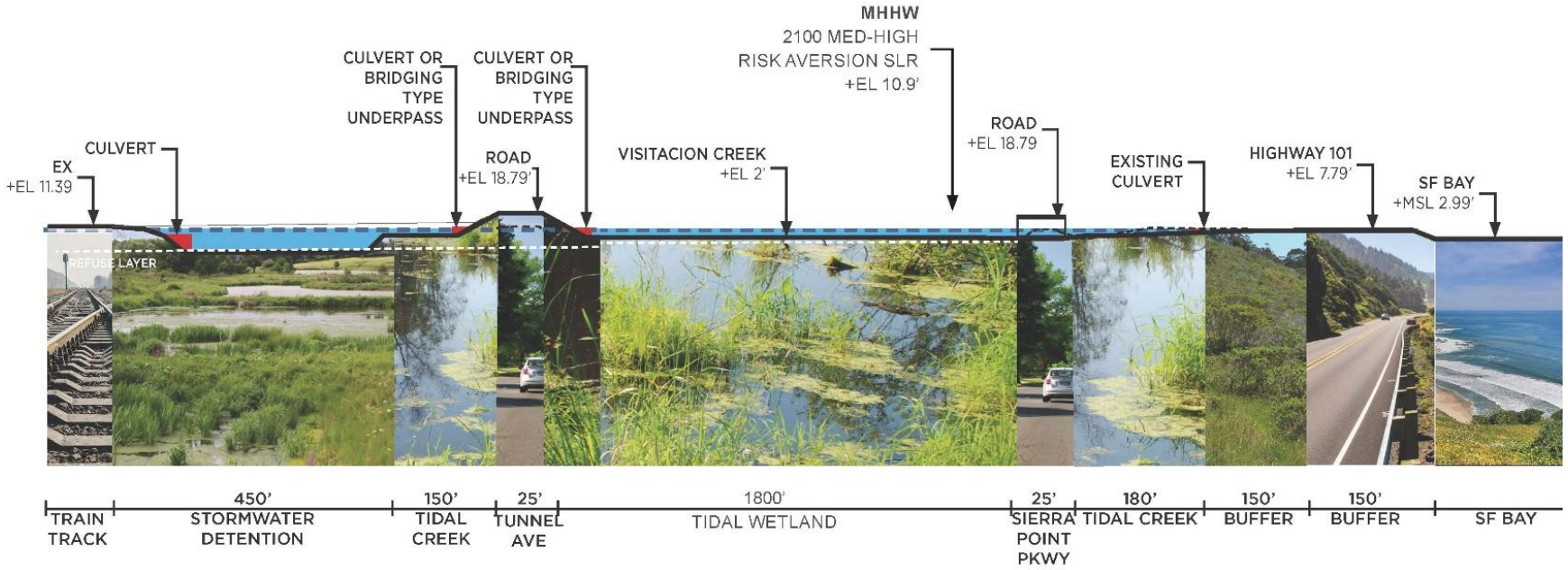


Figure 3-36e: Visitacion Creek Section D-D'



VISITACION CREEK SECTION D-D'

KEY MAP

Stormwater Detention Area (13.8 acres)

The area immediately east of the Caltrain right-of-way is proposed as a 13.8-acre ecologically focused stormwater detention area (see **Figure 3-37**). This naturalized facility with "soft" planted edges of native species would provide permeable soils and forebays, as well as native plantings to slow flow rates and remove nutrients and pollutants. The eastern edge of the stormwater detention area is proposed to transition to Visitacion Creek.

Figure 3-37: Detention Area Example

Icehouse Hill (24.3 acres)

The Specific Plan proposes protection, enhancement, and restoration of native grasslands, coastal scrub, and small pockets of seasonal wetlands on Icehouse Hill (see **Figure 3-38**). Planting of native butterfly host species is proposed to increase butterfly habitat extent and quality. Invasive species management is proposed due to the presence of Eucalyptus sp., fennel, and other non-native species.

In addition to maintaining the natural character and habitat value of Icehouse Hill, "low-impact" gravel trails, a nature play area, native gardens, butterfly garden, overlook(s), hillside slides, educational area(s) with group seating, multi-use trails, and outdoor educational area with educational signage are proposed.

Mission Blue Nursery, a non-profit nursery that collaborates with local communities to restore San Bruno Mountain's native habitats and cultivate its flora, is proposed to be relocated to the former police shooting range. Prior to its relocation, appropriate cleanup and remediation of the firing range site would need to be completed.

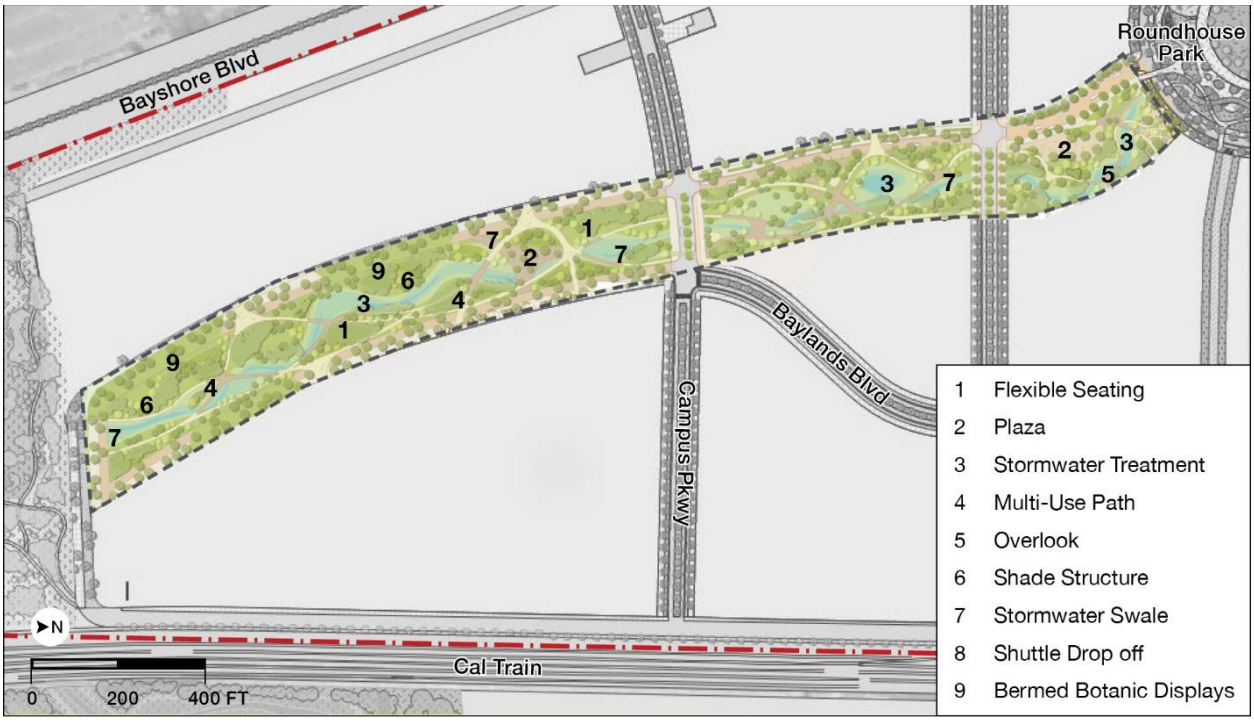
Visual screening of the adjacent Kinder Morgan Tank Farm would also be provided in the form of naturalized vegetation.

The Ecological Park (7.3 acres)

The 7.3-acre Ecological Park is proposed to serve as a primarily naturalized open space within the Icehouse Hill District (see **Figure 3-39**). A central swale is proposed as the primary feature of the Ecological Park. Seasonal rains filling dry creek beds and bioswales are proposed to be directed to stormwater treatment areas within the park to improve water quality. Multi-use paths, overlook(s), shade structure(s), small lawn areas, plaza(s), and flexible seating areas and interpretive features are also proposed within this park.

Figure 3-38: Icehouse Hill Illustrative Concept Diagram

Figure 3-39: The Ecological Park Illustrative Concept Diagram



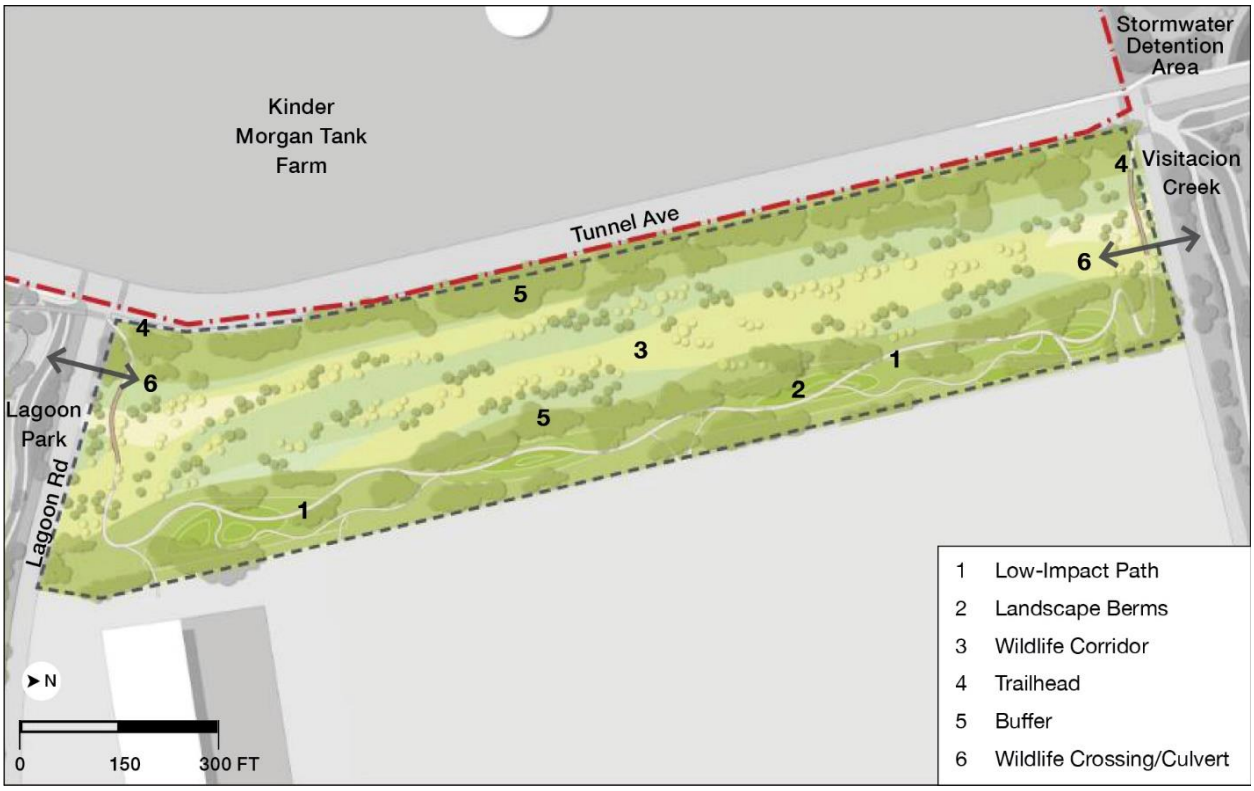
Proposed habitat restoration and enhancement within the Ecological Park includes:

- **Grassland** to provide a naturalized herbaceous assemblage, including an assortment of grasses and wildflowers. Example plant species are Junegrass, purple needlegrass, California melic, lupines, Indian paintbrush, and Douglas iris.
- **Coastal scrub** would be defined by its low-growing woody species such as coyotebrush, snowberry, and wax myrtle, and associated herbaceous species such as lupine, lizard's tail, and western swordfern.
- **Woodland** areas would have the highest canopy and include plantings of live oak, bay, buckeye, and hazelnut trees with an understory sharing many coastal scrub species.

Baylands Preserve (14.1 acres)

The Baylands Preserve central swale would be constructed following Title 27 landfill closure to provide habitat connectivity, wildlife crossings, and pedestrian and bicycle connectivity (see **Figure 3-40**). Coastal scrub and grassland habitat will be provided. The Specific Plan states that wetland habitats and woodland habitats would also be "allowed as deemed viable and beneficial to overall habitat value." A low-impact multi-use pathway and trailhead on the east side of the preserve is also "allowed" as a means of connecting pedestrians to Lagoon Park.

Figure 3-40: Baylands Preserve Illustrative Concept Diagram



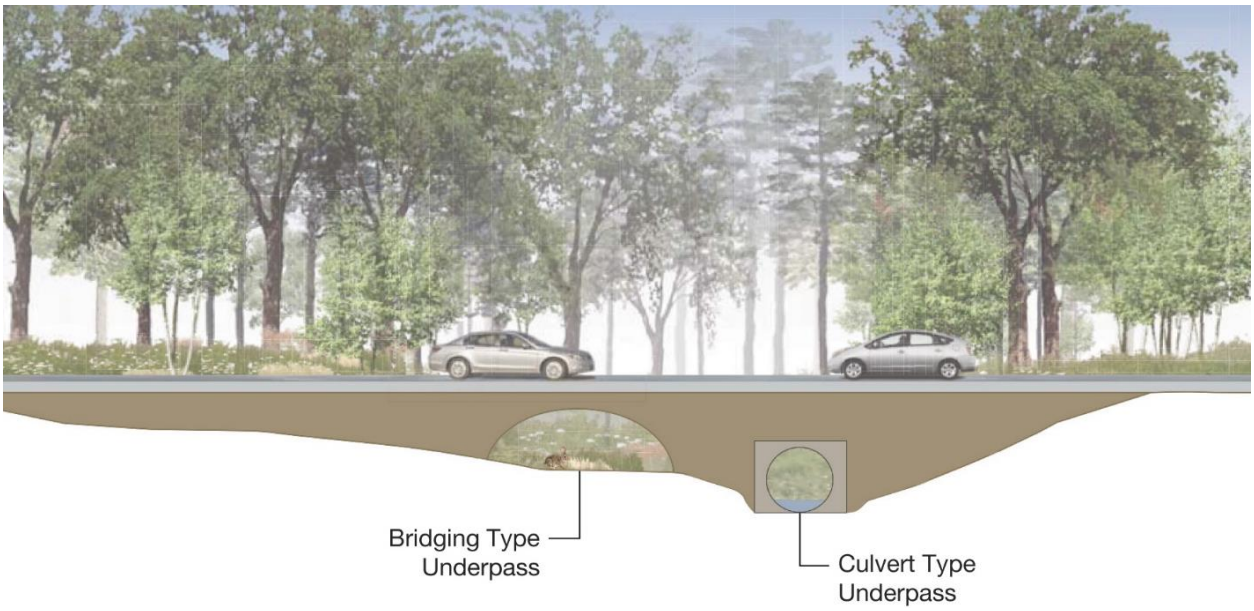
Under-road wildlife connectors are proposed at Lagoon Road and Visitacion Creek Road South in the form of culverts, sized appropriately for small terrestrial fauna. Large evergreen shrubs and trees along Tunnel Avenue to screen views of the tank farm are "allowed" but not required by the Specific Plan. Direct views of the Lagoon and Visitacion Creek are proposed to be provided as vantage allows.

Low-impact trails with trailhead(s) located on the east side of the preserve are proposed to connect pedestrians to Lagoon Park, Visitacion Creek, and adjacent development. Trails are required to be offset or elevated from habitat areas.

Wildlife Connector Types

As noted above, two types of under-road connectors are proposed: clear span bridge and culvert types of underpasses (see **Figure 3-41**).

Figure 3-41: Wildlife Connector Types



g. Water Supply

Water supply for the Baylands is proposed to be provided by the California Water Service Company (Cal Water) "South San Francisco District" using a combination of (1) potable water purchased from the San Francisco Public Utilities Commission (SFPUC) supplemented by five existing off-site groundwater wells and (2) recycled water from the water recycling facility to be constructed within the Baylands. Cal Water potable supplies would be delivered to the site via existing turnouts from the SFPUC regional water system.

To provide water service to the Baylands, Cal Water's South San Francisco District service area would be expanded to include the Baylands, Beatty, and Sierra Point[58] areas

California Water Service Company

California Water Service Company (Cal Water) is an investor-owned public utility supplying water service to approximately 1.8 million Californians through over 481,000 connections. Its 25 districts serve 63 communities spanning from the Chico-Hamilton City District in the north to the Palos Verdes District in Southern California. California Water Service Group, Cal Water's parent company, also provides water service to communities in Washington, New Mexico, and Hawaii. Water rates are set separately for each district, subject to California Public Utilities Commission (CPUC) oversight of the water rate setting process and district operations.

Cal Water incorporated in 1926 and has provided water service since 1931 to the South San Francisco District, which encompasses the communities of South San Francisco, Colma, a small portion of Daly City, and an unincorporated area of San Mateo County known as Broadmoor.

[58] Because the Sierra Point area is currently contiguous to Cal Water's existing service area, its inclusion would make the Baylands contiguous with the South San Francisco District and also provide needed potable water supply for Sierra Point.

within the City of Brisbane while simultaneously removing those areas from Brisbane's water service area (see **Figure 3-42**). The water currently being supplied to the Sierra Point area would then become available to the City to support buildout of the Brisbane General Plan. Water currently being supplied by SFPUC within the Specific Plan area would become available to SFPUC.

In addition to potable water supply, a 1.0-million-gallon-per-day (mgd) capacity water recycling facility would be constructed within the Baylands along the east side of the Caltrain right-of-way adjacent to the on-site water tank. The water recycling facility would be owned and operated by Cal Water and generate 0.52 mgd of recycled water for the Baylands and 0.43 mgd of recycled water for users in South San Francisco to reduce potable water demand both within the Baylands and Cal Water's South San Francisco service area. Recycled water would be supplied to the Baylands for non-potable uses. In addition, recycled water would be made available to Sierra Point, Oyster Point, and other development areas within the northeastern portion of the City of South San Francisco.

h. On-Site and Off-Site Water Infrastructure

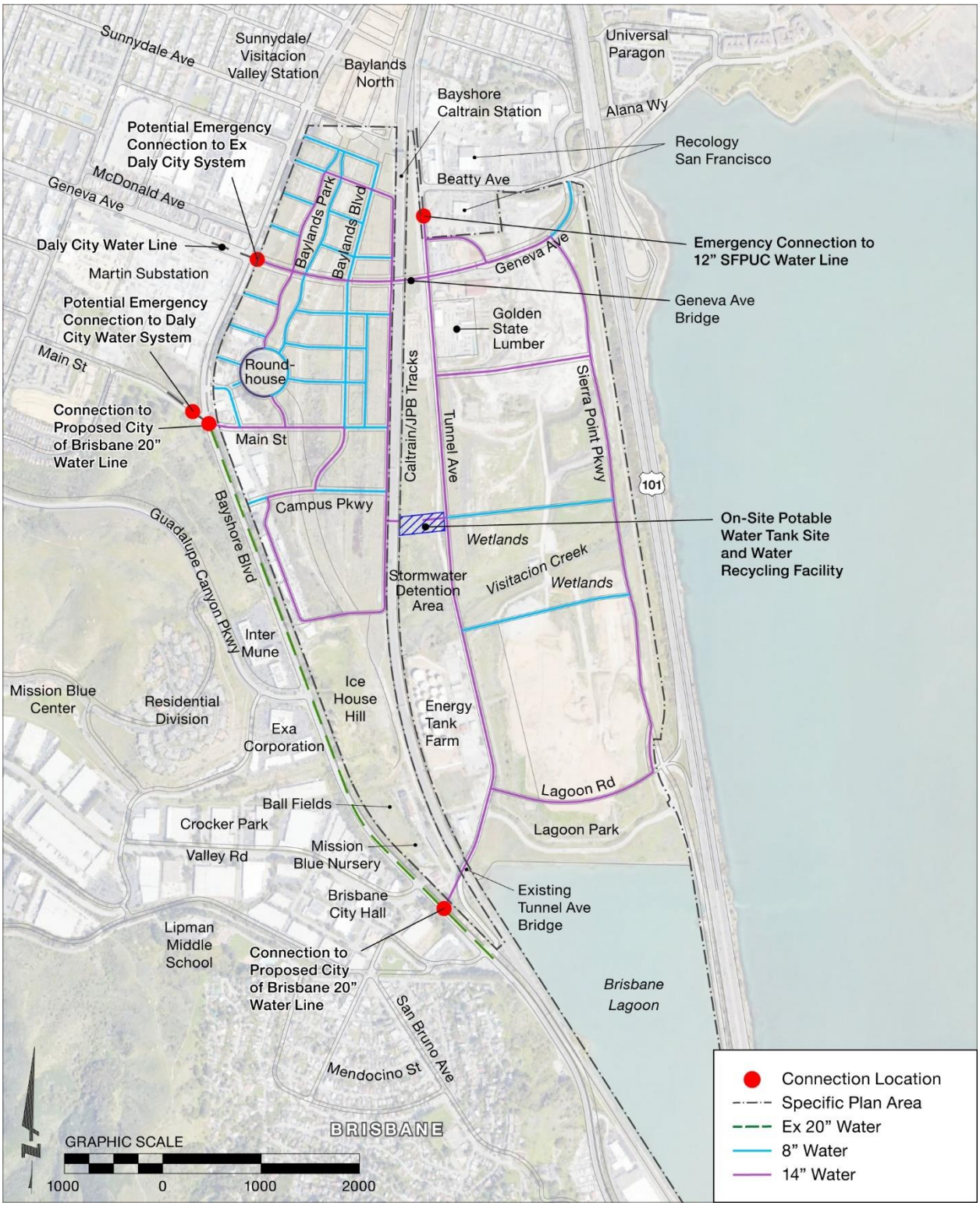
Baylands Potable Water System Improvements

The proposed on-site potable water system is described below.

Pipelines

The Baylands potable water system is proposed to deliver a maximum daily demand of 1,200 gallons per minute (gpm) (flow without the use of recycled water) across the Baylands while being able to provide 6,000 gpm at 20 psi residual pressure to fire hydrants within the Baylands per California Code of Regulations, Title 22, requirements. Subject to review and approval of Cal Water, the Baylands potable water system would consist of a grid of 8-inch-diameter pipes surrounded by 14-inch-diameter loops (see **Figure 3-42**). To connect water distribution systems in the western and eastern portions of the Baylands, 14-inch-diameter pipes are proposed to cross the Caltrain right-of-way at two locations. A water main in Bayshore Boulevard would feed the on-site grid at two locations, which are shown on **Figure 3-42**. Looping local residential water lines would provide the required 6,000 gpm fire flow for residential land uses and reduce potential water quality issues associated with water stagnation.

Figure 3-42: Proposed On-Site Potable Water System



Baylands development would be served from existing turnouts from the SFPUC regional water system; no new turnouts are needed or proposed. The closest turnout, located on Main Street near Bayshore Boulevard, is connected to the SFPUC distribution system, and is intended for use only in an emergency. The other existing turnouts that currently serve the City of Brisbane and Guadalupe Valley Municipal Improvement District (GVMID) service areas would be connected to the Baylands via a proposed transmission main on Bayshore Boulevard. The proposed infrastructure plan also includes the potential for emergency interties with the City of Daly City and SFPUC.

Subject to State of California and California Water Service approvals, the Baylands water system is proposed to be constructed from fusion-welded high-density polyethylene (HDPE[59]) pipe. Fusion-welded HDPE is being proposed by the applicant due to its flexibility and capacity to manage the substantial soil settlement that is anticipated within the Baylands, thereby reducing the potential for pipe shearing.

To accommodate differential settlement at the interface between buildings within the Baylands and proposed HDPE potable or fire water lateral service lines, the *Brisbane Baylands Infrastructure Plan* notes that flexible connections with settlement vaults may be provided to mitigate shearing of utility infrastructure.[60] In addition, approved backflow prevention devices would be installed for both the fire and domestic water connections either within or outside of the buildings per applicable regulations.

Water Storage

To maintain proper water pressure, an approximately 3.16-million gallon storage tank is proposed, which may be provided as a single above-ground tank (approximately 125 feet in diameter and 40 feet tall) or as two or three smaller water storage tanks. If multiple tanks are provided, initial Baylands development would be served from a single storage tank and additional tank(s) then added as needed. In addition to the water storage facility, a pump station with an emergency standby generator is proposed to assure pumping continues during power outages.

Sierra Point Potable Water System Improvements

A turnout from the California Water Company's water system in South San Francisco to the existing water system in the Sierra Point Subarea within Brisbane exists along the existing boundary between Brisbane and South San Francisco. This turnout, which was constructed for

[59] HDPE pipe is a type of flexible plastic pipe that is often used to replace ageing concrete or steel pipelines.

[60] As the ground and vault settle while the building and its water pipes remain fixed, a flexible stainless steel hose would adjust with the ground settlement and prevent pipe shearing.

emergency purposes, would be used to deliver California Water Company supplies to the Sierra Point Subarea and its existing water infrastructure.

The Sierra Point area would continue to be served by existing potable water lines that would be maintained by Cal Water once it starts providing water service to the area.

Recycled Water System

Water Recycling Facility

The water recycling facility would have a capacity to generate a maximum of 1.0 mgd of recycled water from sewage generated within the Baylands, the City of Brisbane, and the Bayshore Sanitary District. Approximately 1.74 mgd of sewage would be pumped to the water recycling facility.[61] The excess flow of approximately 0.74 mgd would be discharged to the SFPUC sewer system for treatment at the Southeast Treatment Plant. The planned capacity of the water recycling facility includes approximately 0.8 mgd for irrigation use during summer months and 0.15 mgd for in-building uses year-round as described below.

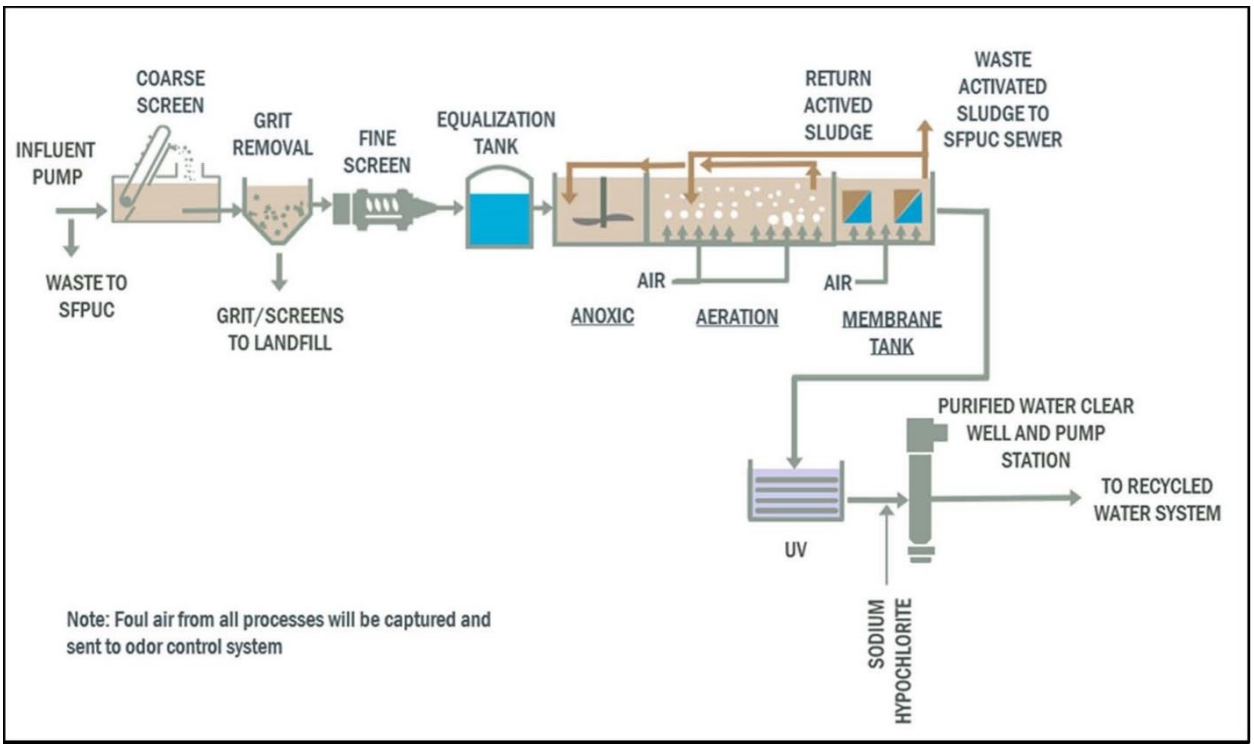
- Within the Baylands, recycled water would be used for irrigating open space areas, roadside planter areas, and landscape water features. In addition, commercial, office, biotech, and retail buildings are proposed to be dual plumbed to supply industrial cooling, non-residential toilet and urinal flushing, and other Title 22 permitted uses. The maximum recycled water demand for the Baylands is estimated to be approximately 0.30 mgd, which includes approximately 0.22 mgd for irrigation use during summer months and 0.08 mgd for in-building uses year-round.
- In addition, recycled water would be delivered to development within South San Francisco to be used for landscape irrigation and industrial cooling, non-residential toilet and urinal flushing, and other Title 22 permitted uses within the Sierra Point, Oyster Point, and other development areas in the northeastern portion of South San Francisco. The maximum recycled water demand for South San Francisco uses is estimated to be approximately 0.43 mgd, which includes approximately 0.36 mgd for irrigation use during summer months and 0.07 mgd for in-building uses year-round.

The proposed water recycling facility design would treat wastewater using a combination of mechanical, biological, and chemical treatment systems to produce Title 22 Disinfected Tertiary Recycled Water for irrigation and toilet flushing. Although the specific treatment technology process train will be determined during final facility design, for planning purposes, the water recycling facility is anticipated to primarily involve a membrane bioreactor system to treat wastewater, which may include a side stream through another natural treatment system. Waste

[61] This 1.74 mgd of sewage would be generated by the Bayshore Sanitary District (0.25 mgd), City of Brisbane (0.40 mgd), and the Baylands Specific Plan area (1.09 mgd).

activated sludge would then be returned through the force main leaving the water recycling facility for discharge to the SFPUC sewer system for treatment at the Southeast Treatment Plant (see **Figure 3-43**). It is anticipated the water recycling facility would produce approximately 50,000 gallons of waste activated sludge for 1.0 mgd of recycled water.

Figure 3-43: Conceptual Water Recycling Facility Flow Schematic



SOURCE: BKF, Baylands Infrastructure Report, 2023.

The design and operation of the water recycling facility would meet the following criteria:

- On-site treatment will produce disinfected tertiary recycled water conforming to California Code of Regulations Title 22 water regulations.
- On-site treatment will have an estimated capacity of 1.0 mgd based on a maximum day irrigation demand of two times the peak-month, average day irrigation demand (approximately 0.8 mgd) plus the average daily demand of 0.15 mgd from other uses.
- Sufficient raw sewage would be treated to satisfy demands for recycled water within the Baylands and provide 0.43 mgd of recycled water to Sierra Point, Oyster Point, and other development in the northeastern portion of South San Francisco.
- Storage tanks, pumps, and emergency generators would be provided.
- All structures would be designed to minimize visual impacts (e.g., installing berms to decrease ground-level visibility). The exterior of the water recycling facility is proposed to be architecturally consistent with other Baylands development.

- The facility would be constructed and operational concurrent with the first Baylands recycled water demands, drawing raw sewage as needed from the City and Bayshore Sanitary District.

Baylands Recycled Water System

Figure 3-44 illustrates the proposed on-site recycled water distribution system. Recycled water distribution mains are proposed to consist of a grid of 6-inch HDPE pipe surrounded by an 8-inch HDPE looped system. Since refuse and Bay Mud soil conditions are susceptible to significant settlement, the fusion-welded joints of the HDPE pipe are proposed to be designed to be flexible and withstand anticipated differential settlement within the Baylands. Service lines delivering recycled water to buildings, parks, and open space for recycled water would be metered and include code-required backflow protection.

Storage for recycled water is proposed to meet the single maximum day recycled water demand. Storage for recycled water is proposed to be provided by either constructing steel or concrete storage tanks or within a clear well, and/or within a combination of constructed wetland areas near the proposed water recycling facility. Pipelines are proposed to be constructed to allow for connection of these storage facilities to the recycled water distribution system.

The applicant proposes fusion-welded HDPE for recycled water use, because, due to its flexibility and capacity, it would reduce the potential for pipe shearing that could result from the substantial soil settlement that is anticipated within the Baylands. In addition, flexible connections within settlement vaults are proposed to be provided to mitigate the potential for shearing of the utility infrastructure due to differential settlement of on-site soils.

Proposed South San Francisco Recycled Water System

As shown in **Figure 3-45**, a recycled water line is proposed to be constructed west from the Baylands water recycling facility to Bayshore Boulevard, turning south for approximately 2 miles where the pipeline could be extended through the Sierra Point area within Brisbane south into the City of South San Francisco. From Bayshore Boulevard (at Sierra Point), the recycled water line would continue approximately 1 mile further south until approximately Chapman Avenue in the South San Francisco.

In total, approximately 5.5 miles of off-site recycled water pipelines are anticipated. Trenching work for recycled water pipeline installation outside of the Specific Plan would generally consist of cut-and-cover methods, except where crossing of Caltrain tracks and US 101 may require trenchless methods, such as jack-and-bore techniques. It is conservatively estimated that cut and cover work would proceed at a rate of 100 feet per day. Because the location of specific recycled water users cannot be known at this time, the location of local recycled water lines cannot be known at this time.

Figure 3-44: Proposed Baylands Recycled Water System

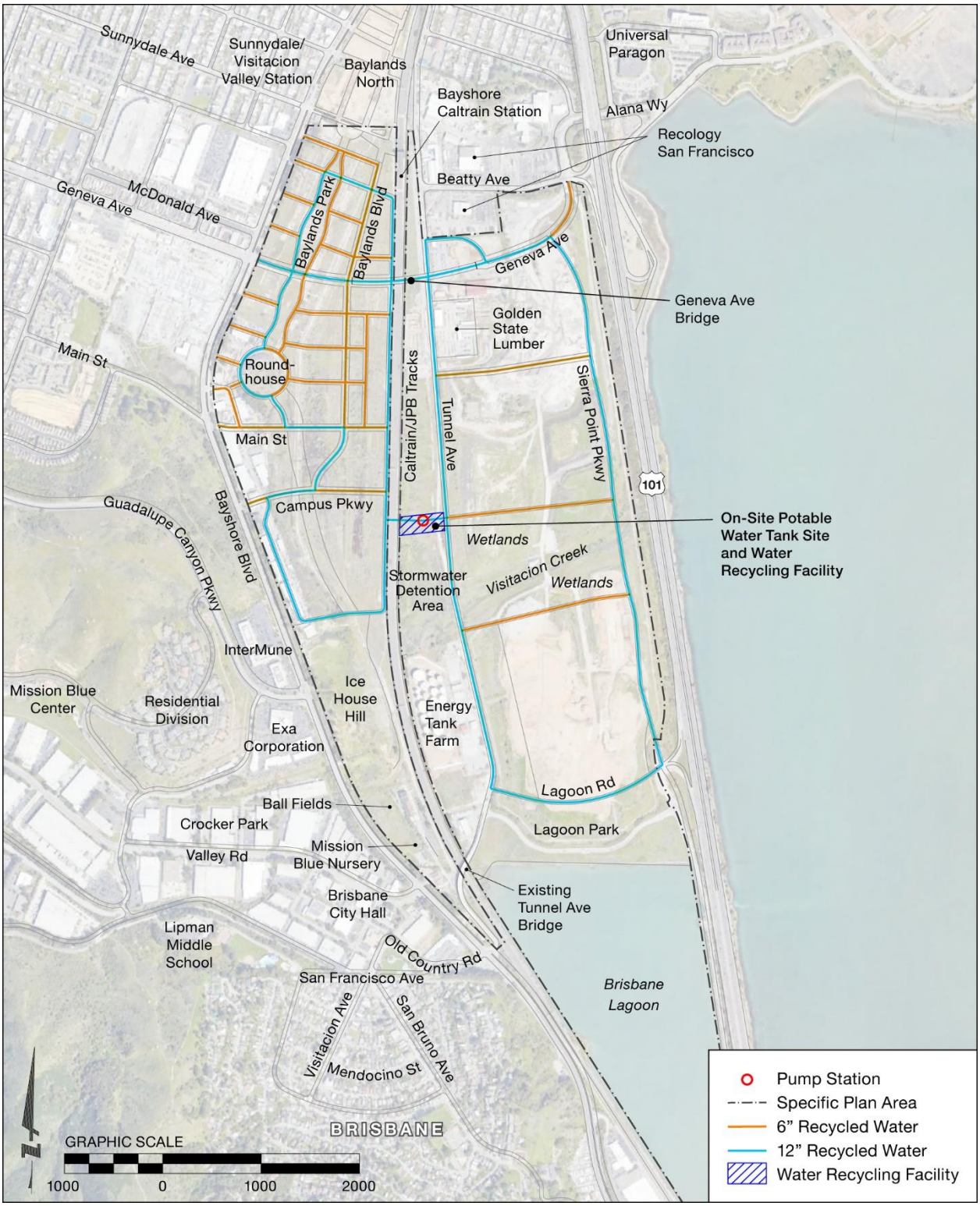
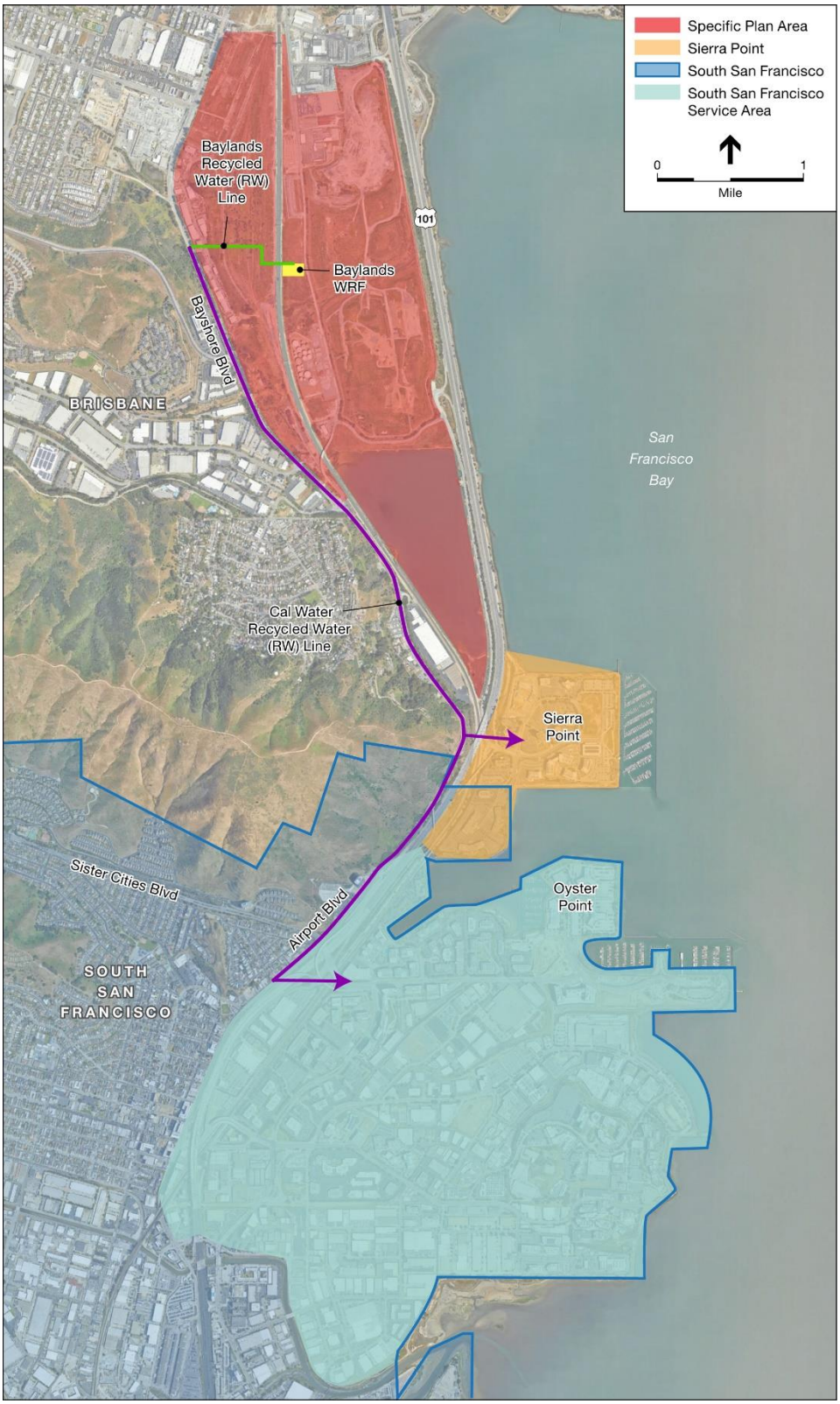


Figure 3-45: Proposed Cal Water Service Areas in Brisbane and Recycled Water Service Areas in South San Francisco



i. Baylands Wastewater System

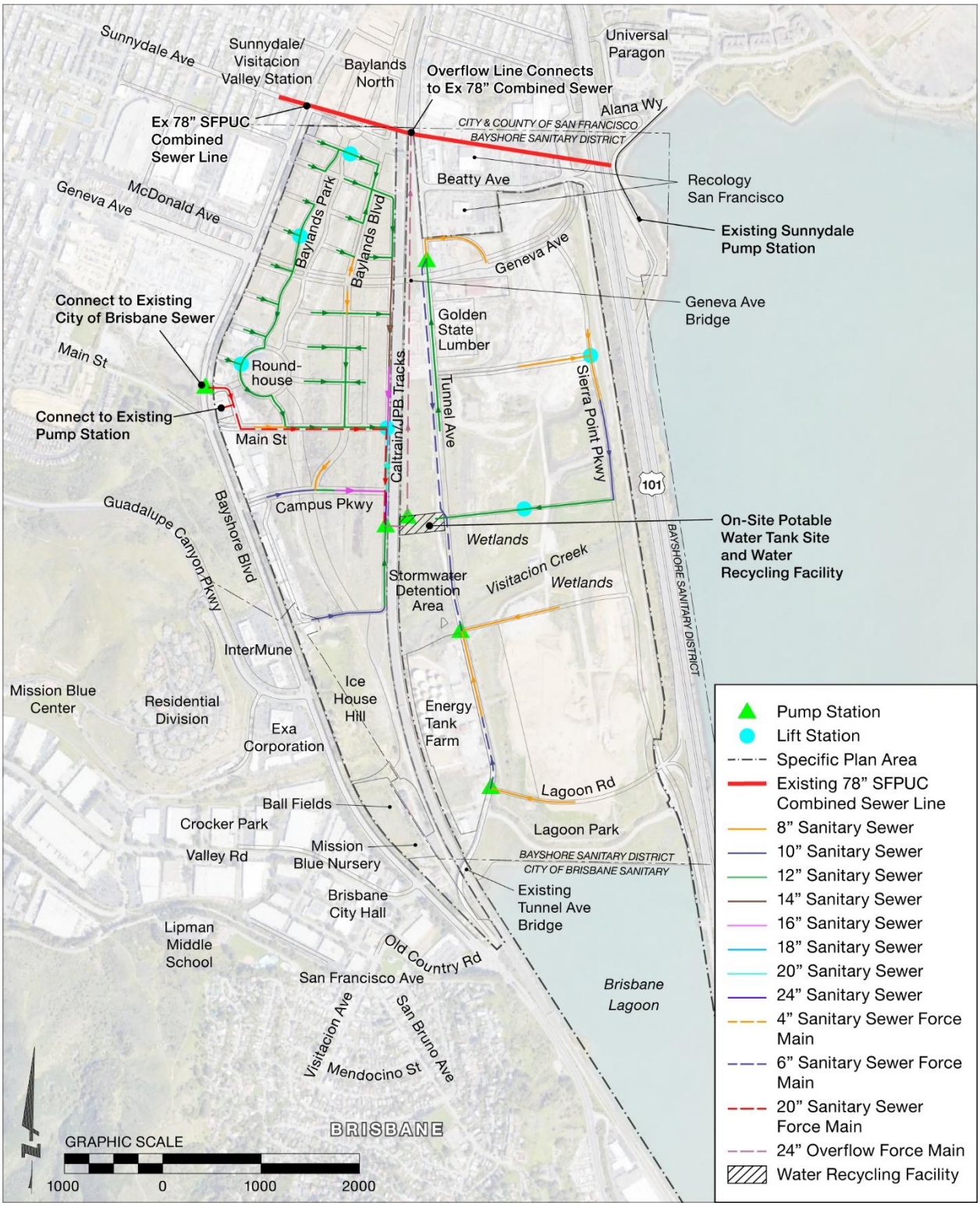
The Baylands site currently lies within the Bayshore Sanitary District, which owns and operates wastewater collection facilities. Proposed Baylands sewer system improvements are illustrated in **Figure 3-46**. Within the area west of the Caltrain right-of-way, wastewater is proposed to be collected and conveyed through a series of HDPE gravity mains and inline lift stations, where sewage would be pumped underneath the rail line into the proposed Baylands water recycling facility

Within the eastern portion of the Baylands, wastewater is proposed to be collected and conveyed as follows:

- In the area between the Brisbane Lagoon and Visitacion Creek, wastewater is proposed to be collected in a series of gravity mains. In combination with the piping system, pump and lift stations would convey flow to a new pump station located adjacent to the intersection at the northeast corner of the Kinder Morgan Tank Farm. Wastewater flow is then proposed to be pumped to the water recycling facility.
- In a portion of the northernmost area of the existing landfill adjacent to Geneva Avenue, wastewater is proposed to be collected by a series of gravity mains. In combination with the piping system, a pump station adjacent to northwestern corner of the former landfill at Tunnel Avenue would pump wastewater flow to the water recycling facility.
- Within the area between Geneva Avenue and Visitacion Creek along Sierra Point Parkway, wastewater flow is proposed to be collected by a series of gravity mains and lift stations and conveyed to the water recycling facility.
- Gravity and force mains within the Baylands are proposed to be constructed with HDPE pipe to accommodate anticipated ground settlement.
- To accommodate differential settlement at the interface between proposed structures and sanitary sewer lateral service connection lines, flexible connections with settlement vaults are proposed to be provided to avoid shearing of utility infrastructure.

Included in the design of the Baylands water recycling facility will be connections for City of Brisbane and Bayshore Sanitary District sewage to the delivered to the facility when needed to meet demand for recycled water. This would likely consist of lines directly from the existing nearby Valley Drive and/or Bayshore Sanitary District lift stations to the water recycling facility.

Figure 3-46: Proposed Baylands Wastewater System



SOURCE: BKF Engineers, *The Baylands Infrastructure Report*, January 2023.

j. Stormwater Drainage

The proposed Baylands stormwater management system includes a combination of Visitacion Creek restoration and improvements, expanded wetlands, bioswales, and underground box culverts and storm drains. The proposed drainage plan is illustrated in **Figure 3-47**. Proposed site grading and drainage include redirecting 19 acres of tributary area from the Beatty Avenue drainage area to the Bayshore drainage area, which helps alleviate existing downstream combined sewer overflows in the Harney Way box culvert.

The Baylands drainage system is proposed to be designed to convey peak flows based on the following criteria:

- Storm drainage collection facilities will have capacity to convey the peak flow rate from a 25-year storm event entirely within the piping system such that Baylands roadways and recreational facilities are not flooded.
- The stormwater system will accommodate the 100-year peak storm event within drainage channels, underground storm drains, and streets such that the finished floor elevations of proposed new Baylands buildings have a minimum of 1 foot of freeboard above the 100-year storm event hydraulic grade line water elevation with tidal flow and an estimated 6.9 feet (83 inches) of sea level rise (Year 2100 medium-high risk sea level rise projection).
- Stormwater conveyance and storage capacity will be sufficient to keep key roadways, including Sierra Point Parkway, Lagoon Road, and Tunnel Avenue available as evacuation routes in the event of a 100-year storm event with tidal flows.
- Existing drainage inlets fronting Levinson Overflow Area and the PG&E Martin Substation will be hydraulically isolated from the existing Brick Arch Sewer system.
- Within the eastern portion of the site:
    - Underground stormwater installations will be designed to minimize impacts to the underlying Low Hydraulic Conductivity Layer for landfill closure.
    - Storm drain materials and design will include materials and installation techniques that address anticipated settlement due to compression/ decomposition of the waste material.
- The Specific Plan proposes that newly constructed public parks and publicly accessible open space would be designed with 1 foot of freeboard above the Year 2050 medium-high-risk sea level rise projection estimated to be 1.9 feet (23 inches). Thus, portions of certain parks will be designed for daily inundation due to sea level rise.

Figure 3-47: Proposed Drainage System

SOURCE: BKF Engineers, The Baylands Infrastructure Report, January 2023.

Bayshore Drainage Area

Existing drainage facilities within the eastern portion of the Baylands will be removed and/or replaced to allow for installation of the proposed landfill cap and cover to facilitate Title 27 landfill closure. Existing drainage facilities within the western portion of the Baylands will be removed as needed to comply with Remedial Action Plans for OU-SM and OU-2 and support site grading for proposed Baylands development.

The proposed storm drain piping system for the Bayshore drainage area is described in the Baylands Infrastructure Report as consisting of a series of 18-inch to 66-inch fusion-welded HDPE pipes, 78-inch-diameter reinforced concrete pipes, culverts, and U-channels. A combination of on-site pipes, culverts, and conveyance and catchment structures is proposed to direct the stormwater runoff to stormwater treatment facilities and the freshwater wetlands prior to discharging to Visitacion Creek east of the Caltrain right-of-way.

Beatty Avenue Drainage Area

Existing storm drain infrastructure within the remaining 27 acres of the Beatty Avenue area will be retained or replaced in its current location. This infrastructure connects to the existing 42-inch-diameter storm drainage infrastructure in Beatty Avenue.

Brisbane Lagoon Drainage Area

As part of the realignment of Lagoon Way, existing culverts will be replaced with a minimum of two new outfalls to the Brisbane Lagoon. Installation of the new Brisbane Lagoon outfalls is proposed to be coordinated with landfill closure activities and adjacent Kinder Morgan infrastructure.

Visitacion Creek Improvements

Levinson Overflow Area and Brick Arch Sewer

Currently, during a large storm event, up to 2.2 feet of flooding occurs for a period of nearly three hours near the intersection of Bayshore Boulevard and Industrial Way. To alleviate flooding conditions and increase the conveyance capacity of the Bayshore Boulevard storm drainage system, Bayshore Boulevard drainage inlets fronting the Levinson Overflow area are proposed to be hydraulically isolated from the existing Bayshore system and brick arch sewer, which is proposed for removal. The *Brisbane Baylands Infrastructure Plan* reports that these improvements would reduce flooding during the 100-year storm event to approximately 1.2 feet over a 109-minute period, and that the 25-year design storm event would be contained within the proposed storm drain system.

Visitacion Creek Improvements West of the Caltrain Right-of-Way

As the result of the above proposed improvements near the intersection of Bayshore Boulevard at Industrial Way, stormwater flows would converge at a proposed large inlet structure near the Bayshore Boulevard/Industrial Way intersection and be routed through the western portion of the Baylands in a culvert or U-channel that would discharge to Visitacion Creek east of the Caltrain right-of-way.

Visitacion Creek Crossing under the Caltrain Right-of-Way

Visitacion Creek is proposed to cross under the railroad right-of-way in two approximately 175-foot-long, 6.5-foot-diameter circular pipes that will be constructed with structural headwalls on each side for structural support of the tracks. The design of these culverts and the adjacent detention area will include natural or mechanical backflow prevention solutions to prevent tidal influence from reaching the area west of the railroad right-of-way.

Within the eastern, former landfill portion of the Baylands, Visitacion Creek grading is proposed to be designed to accommodate the anticipated 100-year flood, inclusive of anticipated sea level rise through Year 2100 within the creek banks. As a result, the maximum top-of-bank elevation is anticipated to be 14 to 15 feet adjacent to proposed freshwater wetlands, which would provide approximately 4 to 5 feet of freeboard. The *Brisbane Baylands Infrastructure Plan* reports that although soil consolidation settlement has not been documented on the former landfill for this level of fill, information from adjacent areas "indicates that up to 2 feet of settlement in the channel could be anticipated."

Stormwater Detention Area

To support the attenuation of peak flows, a stormwater detention area is to be provided between the Caltrain right-of-way and Tunnel Avenue, providing approximately 45.2 acre-feet of detention storage. The design will include natural or mechanical backflow prevention solutions to prevent tidal influence from reaching the detention area. To maintain its stormwater function and maintain hydraulic capacity, ongoing maintenance will include selective pruning and minimized root system disturbance, ensuring side slope stability through non-invasive activities.

Visitacion Creek Crossings under Tunnel Avenue and Sierra Point Parkway

Visitacion Creek's existing undersized and deteriorated culverts under Tunnel Avenue and Sierra Point Parkway will be removed. A small culvert or clear span bridge will be provided at Tunnel Avenue, with a clear span bridge provided at Sierra Point Parkway.

Under-road wildlife connections are proposed at Tunnel Avenue, Visitacion Creek Road North, and Sierra Point Parkway, in the form of a small culvert or clear span bridge, sized appropriately for small terrestrial fauna to traverse between local and regional habitat patches.

US Highway 101 Box Culvert and San Francisco Bay Outfall

Stormwater within Visitacion Creek discharges into the existing 10-foot by 10-foot box culvert under US Highway 101. To reduce friction losses and improve the functional capacity of the box culvert, a thorough cleaning to remove sediment buildup and refuse and repair large cracks is proposed to be undertaken as part of Baylands development.

Proposed Storm Drain System Pipe Materials

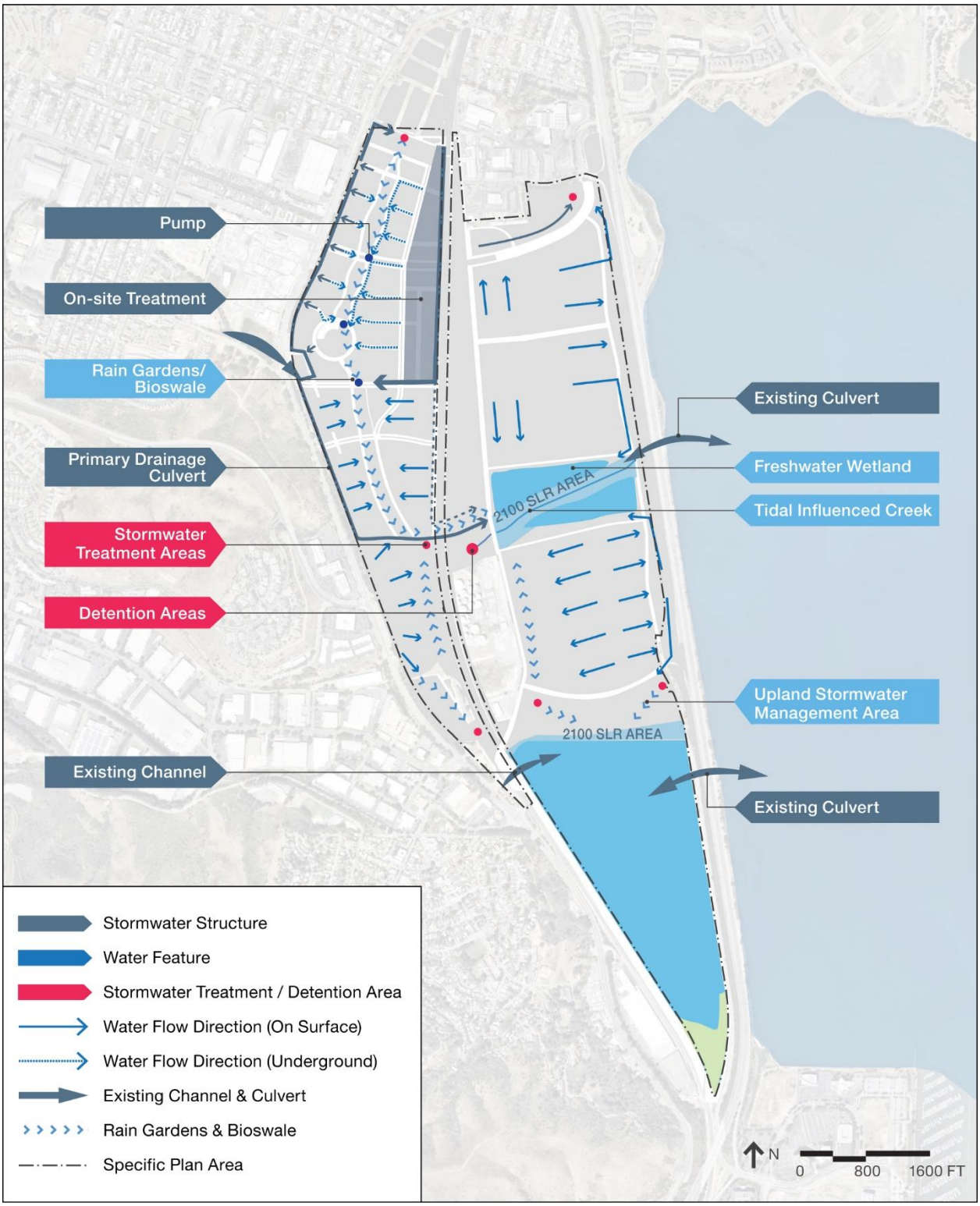
The storm drain piping system is proposed to consist of fusion HDPE pipe. Where minimal cover is available and large capacity required, shallow concrete culverts are proposed to be used to avoid encroaching into the Low Hydraulic Conductivity Layer that is proposed to be installed as part of the Title 27 landfill closure process. The pipes are proposed to be connected using fusion-welded joints to limit groundwater infiltration and stormwater contamination from landfill leachate. Since refuse and Bay Mud soil conditions are susceptible to substantial settlement, fusion-welded joints are proposed to be designed to be flexible and withstand anticipated differential settlement. To accommodate differential settlement at the interface between proposed structures and storm drain lateral service connections, flexible connections with settlement vaults would be provided where needed to avoid shearing of the drainage infrastructure.

Stormwater Treatment

Stormwater treatment within the Baylands will be required to meet the provisions of National Pollutant Discharge Elimination System (NPDES) municipal stormwater permits, as implemented by the San Francisco Bay Regional Water Quality Control Board (RWQCB), RWQCB's Provision C.3, as well as the San Mateo Countywide Water Pollution Prevention Program.

The Baylands Infrastructure Plan concludes that non-infiltrating treatment techniques should be used to limit the potential for stormwater runoff to mix with municipal solid waste and contaminated soil. Use of infiltration-type treatment measures would be underlain with a perforated storm drainpipe on top of an impermeable liner. The proposed stormwater treatment system (illustrated in **Figure 3-48**) would minimize both water infiltration into contaminated soils and the Title 27 compliant cap on top of the landfill.

Figure 3-48: Proposed Stormwater Treatment System



Source Controls and Site Design

In addition to compliance with Regional Water Quality Control Board Municipal Regional Stormwater Permit Order No. 2015-0049 as amended by Order No. 2019-0004 Provision C.3 (Provision C.3) and the San Mateo Countywide Water Pollution Prevention Program C.3 Regulated Project Guide (Guidebook), improved Visitacion Creek and the open space areas are proposed to include freshwater wetlands that will receive stormwater runoff from the on-site development. In these areas, a portion of the stormwater runoff generated by on-site development and roadways would flow to freshwater wetlands within Visitacion Creek. Prior to conveyance to the freshwater wetlands, runoff is proposed to be treated in compliance with Provision C.3 requirements.

Proposed Baylands Stormwater Treatment Solutions

Baylands stormwater treatment is required to comply with Provision C.3 such that stormwater runoff is treated prior to discharge to the on-site storm drainage system and Visitacion Creek, which conveys flows to San Francisco Bay through an existing outfall. Within Baylands remediation and landfill areas where infiltration of stormwater would not be permitted, use of natural, landscape-based stormwater treatment measures is proposed per Provision C.3 as the next preferred means of stormwater management.

As illustrated in **Figure 3-48**, compliance with Provision C.3 is proposed through multiple treatment solutions in a "treatment train," where water is to be filtered through a combination of rain gardens and bioswales, such as those provided within the Ecological Park in the western portion of the Baylands, as well as stormwater detention and bio-retention areas and freshwater wetlands, such as those that are proposed to be provided in the eastern portion of the Baylands.

The specific engineering design and design calculations for each of the facilities indicated in **Figure 3-48** are required to be submitted to the Brisbane City Engineer for review and approval prior to issuance of a grading permit. Preparation of a final Stormwater Management Plan (SMP) for review and approval by the Brisbane City Engineer is also required prior to issuance of a grading permit. The SMP is intended to be developed in conjunction with the City's Storm Drain Master Plan to ensure that the treatment designs support the hydraulics and hydrology of the proposed Baylands storm drainage system.

Stormwater Treatment within Site-Specific Development Projects and Roadway Rights-of-Way

Additional stormwater treatment is proposed within site-specific development projects and along roadway rights-of-way, including the following treatment options:

- **Bioswales**, such as those proposed within the Ecological Park, can also be designed for use within site-specific development projects and roadway landscape plantings. Bioswales are open, shallow channels typically in a trapezoidal shape with vegetation on all sides, typically 2 feet deep and 4 feet wide and a minimum of 100 feet in length.

Treatment through bio-retention swales is achieved by filtering runoff through the vegetation in the channel, filtering through a subsoil matrix, and/or infiltration into the underlying soils. Bio-retention swales trap particulate pollutants, promote infiltration, and reduce the velocity of stormwater runoff.

- **Bio-retention areas**, such as those proposed along Visitacion Creek, are large planted, landscaped areas used for detaining and treating local runoff. For treatment, a bio-retention area typically collects storm event runoff and allows it to infiltrate through the soil matrix to filter out particulate pollutants and debris before collecting in a perforated pipe subdrain and discharging to the storm drain system. Flows may be pumped to the planters where grading constraints do not permit gravity flow. Because drainage is directed to a subdrain, adequate depth needs to be provided for the proper operation of a bio-retention area. Bio-retention areas can also include an impermeable liner where clayey soils, a high-water table, or site remediation and landfill closure requirements prevent water from infiltrating the native soils.
- **Self-retaining areas** are a stormwater management concept that involves directing runoff from impervious walkways, pathways, and rooftops to adjacent pervious vegetated areas for biological uptake, evapotranspiration, and (within limited areas of the Baylands not affected by site remediation or landfill closure) infiltration. For vegetated areas to provide 80 percent capture of the average annual runoff and thus comply with the Provision C.3 requirements, self-retaining areas must comply with the following:
    - Provide surface treatment that includes permeable pavement, landscaping, or lawn;
    - Retain the first 1 inch of rainfall without runoff;
    - Incorporate a maximum impervious to pervious area ratio of 2:1;
    - Install inlets 3 inches above adjacent grade of the vegetated area; and
    - Grade vegetated areas with perimeter berms or with a concave shape
- **Tree well filters** are treatment planter systems integrated with trees typically used to treat smaller areas or used in a series to treat larger areas. Runoff would be directed from gutter flows into the area between the tree grate and the top of soil media. Then treatment is provided by filtering runoff through an 18-inch subsoil matrix and/or infiltration into the underlying soils. Infiltration through the compacted soil is limited to 5 inches per hour, which limits the available treatment area per tree well. Typically, tree well filters are a viable alternative for areas with high pedestrian space demand where a landscape planter is not feasible.
- **Flow-thru planters** are rectangular in shape with overall depths averaging 3 to 4 feet. Flow-thru planters can be located at ground level, such as within a parking lot, or

elevated a few feet against the side of a building to collect drainage from roof water downspouts.[62] Once runoff is discharged to a flow-thru planter, treatment is achieved by allowing biological filtration through the surface vegetation followed by slowly filtering runoff through a subsoil matrix at a rate of approximately 5 inches per hour. The treated runoff would then be collected by a perforated subdrain for discharge to the site storm drainage system and/or infiltrated into the underlying soils where permitted within the Baylands by site remediation and landfill closure requirements.

- **Permeable pavement** includes porous Portland Cement Concrete, porous asphalt concrete, porous pavers, and cellular paving grids. Permeable pavement areas are typically installed with relatively flat surface slopes to encourage a greater amount of infiltration while larger flows discharge through an overflow inlet. Permeable pavement can reduce peak flow rates from sites by storing and slowing stormwater runoff as it permeates through its structural section. Where a high groundwater table is present or remediation and landfill closure requirements restrict infiltration, permeable pavement requires an impermeable liner with runoff collecting through a perforated pipe subdrain that discharges to the storm drain system and thus the pavement can no longer be considered a treatment measure.
- **Credits for Tree Installation.** Trees within landscaped areas can help offset 5 to 10 percent of the impervious area requiring treatment. As a treatment measure, trees are typically used within small, otherwise difficult to treat areas, and would be subject to City approval.
- **Green roofs** are considered "self-treating areas" or "self-retaining areas," which the Baylands Infrastructure Report states "can be designed to drain directly to the Baylands storm drain system." The Specific Plan does not, however, require green roofs or drainage from roofs directly to the storm drain system. A green roof can be either extensive, with 3 to 7 inches of lightweight substrate and a few types of low profile, low-maintenance plants, or intensive with a thicker 8- to 48-inch substrate. Green roof system planting media needs to be sufficiently deep to provide capacity within the pore space of the media to capture 80 percent of the average annual runoff. The use of green roofs would reduce the amount of roof area available for solar energy production and would thus be limited to areas not required to meet the Baylands net zero energy performance standard.

The 2025 Specific Plan project proposes that the precise stormwater treatment techniques, or combination of techniques, to be constructed at specific locations would be determined as part of each site-specific development proposal. The Specific Plan states that Baylands development would comply with applicable legal requirements for stormwater treatment.

[62] Within the Baylands, the design of flow-thru planters would be required to provide sufficient depth to meet applicable site remediation and landfill closure requirements.

k. Energy Facilities

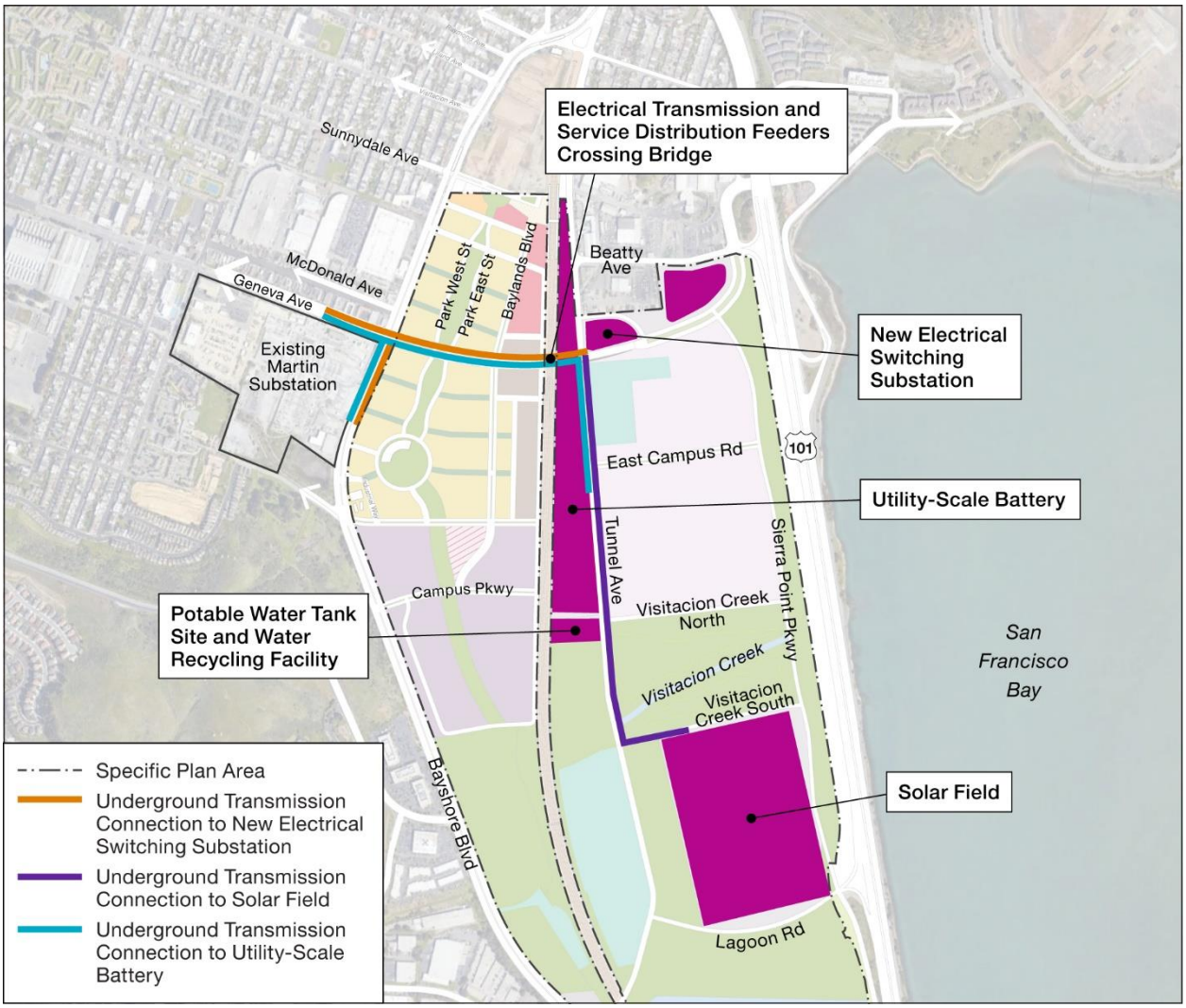
Electrical Facilities

The Specific Plan proposes that electric power for construction and future uses continue to be provided by Pacific Gas and Electric Company (PG&E). Proposed Baylands energy improvements are illustrated in **Figure 3-49** and include:

- Undergrounding of existing overhead lines and construction of new on-site electrical supply lines underground in joint trenches with communications infrastructure;
- A minimum of 85,000 megawatt-hours (MWh) of solar energy generation;
- A 250-megawatt (MW) battery storage facility, including an underground generation interconnect (gen-tie) line[63] connection to the existing PG&E Martin Substation across Bayshore Boulevard from the Baylands;
- Proposed improvements within the Martin Substation to connect the 250 MW battery storage facility and Baylands development would be constructed by PG&E and include:
    - Installation of line disconnect switch and line coupling capacitor voltage transformers for the gen-tie line with the following protection:
        - Installation of line current differential (LCD) relay scheme on the Martin Substation —Baylands Battery 115kV line. Relays compliant with PG&E specifications and requirements at the installation will be used.
        - Installation of fiber termination at the Martin Substation
        - Each LCD scheme will be provided with redundant fiber circuits with no common point of failure.
    - Installation, termination, and testing new fiber cable from station property line to control building.
- Installation of 30 MW of battery storage capacity distributed across the site within sustainable infrastructure, residential, and commercial areas; and
- An approximately 2-acre on-site switching substation.

[63] An underground generation interconnect (gen-tie) line is a series of wires and cables connecting nearby power generation and storage sites and substations.

Figure 3-49: Proposed Baylands Electrical System Improvements



Utility Undergrounding

Existing overhead electrical utility lines within the Baylands, including those along Tunnel Avenue, will be undergrounded. All new electrical distribution lines within the Baylands will be installed underground in joint trenches with the Specific Plan area's communications infrastructure. Standard above-grade secondary service transformers and/or switching would be deployed for building service connections per PG&E guidelines.

Solar Energy Generation

Solar-powered energy generating systems producing a minimum of 85,000 MWh of electricity are proposed, including:

- An approximately 55-acre solar farm in the southeastern portion of the Baylands between Visitacion Creek and the relocated Lagoon Road. The solar farm would be constructed in phases as Title 27 landfill closure is completed for those portions of the former landfill upon which the solar is to be located.
- Solar panels installed on buildings,[64] ground-mounted (no more than 30 feet above grade), and, where feasible, over parking lots.

On-site energy generation is proposed to connect to a switching station through underground lines located in joint trenches with project communications lines.

Battery Storage

Approximately 30 MW of stationary battery storage capacity is proposed to be distributed across the Baylands within sustainable infrastructure, residential, and commercial land use areas as permitted to provide for establishment of a distributed energy resource management system.

In addition, a 250 MW front-of-the-meter, utility-scale battery storage facility is proposed to be developed as a regional grid resource. The facility would be operational 24/7 and require minimal staffing. The utility-scale battery facility would consist of lithium-ion battery cells housed in freestanding enclosures within an approximately 10-acre site along Tunnel Avenue. The number, size, layout, and capabilities of each enclosure that would be needed for 250 MW of storage varies between different system manufacturers. On average, enclosures would be approximately 10 feet in height (inclusive of the foundation), approximately 8 feet in width, and 20 to 40 feet in length. A combination of fencing or block walls along with landscaping is proposed to be provided for security along with landscape plantings for visual screening.

Typical battery enclosure.

[64] The Specific Plan permits roof-mounted solar panels to be installed as a solar yard or to be used as shade structures for roof terraces. Where used as shade structures, solar panels could extend up to approximately 15 feet above the maximum building heights proposed in the Specific Plan.

Battery enclosures and other equipment to a maximum height of 30 feet would sit on concrete pads designed to support their weight. Batteries will be Underwriters Laboratories (UL) certified and include built-in fail-safes and multi-layered fire protection features designed to prevent thermal runaway and the spread of fire. A fire protection suppression plan would be prepared to the satisfaction of the City and North County Fire Authority as part of the site-specific development review process for the facility to ensure fire safety. While normal operations of the utility-scale battery facility would be separate from the rest of the Baylands electrical system, infrastructure will be in place to allow the utility-scale battery facility to supplement Baylands storage resources as needed to achieve energy neutrality.

On-Site Switching Substation

Interconnection(s) to the existing PG&E grid would be delivered by a new dedicated high- and medium-voltage switching substation located within the Sustainable Infrastructure land use area (see **Figure 3-49**). High voltage (115 kV) circuits would be extended underground from the existing Martin Substation to an approximate 2.0- to 3.0-acre switching substation to be constructed within the Baylands. The switching substation would include enclosed high-voltage air or gas insulated switching and outdoor oil-cooled step-down transformers for distributing new medium-voltage circuits within the development capable of supporting approximately 231 MW of on-site load service upon Baylands build-out. The on-site substation would also serve to interconnect the Baylands solar energy generation facilities and up to 30 MW of stationary battery storage capacity.

Switching substation example.

Natural Gas

Consistent with the Baylands Sustainability Framework, the Specific Plan proposes not to extend natural gas service to new development. Existing natural gas service to the Kinder Morgan Tank Farm, Recology uses along Tunnel Avenue, and Golden State Lumber will be maintained. Research and development uses within the Baylands would be required to use on-site propane tanks on an as-required basis.

1. Telecommunications Infrastructure

The Specific Plan proposes to install telecommunications infrastructure, including telephone, cable, and high-speed fiber optics in underground combined joint trenches with electric

facilities. Coordination with AT&T, Comcast, and other providers, along with design plans, would be required prior to approval of construction of Baylands roadways.

Small wireless telecommunications[65] are largely exempt from local regulation and would thus be permitted within roadway rights-of-way and public utility easements within the Baylands. Installation and operation of wireless telecommunications facilities other than small wireless telecommunications facilities within roadway rights-of-way and public utility easements would comply with Brisbane Municipal Code Section 17.32.032, which permits building or roof-mounted as well as pole-mounted antennas outside of residential and open space zoning districts subject to a minimum 600-foot separation from residential districts and approval of an Administrative Permit by the Brisbane Zoning Administrator. A conditional use permit approved by the Planning Commission is required for wireless telecommunications facilities with proposed locations and designs that are not otherwise permitted or subject to approval of an Administrative Permit.

m. Public Services and Facilities

Schools

The Specific Plan area is primarily served by the Bayshore Elementary School District, which currently houses its 347 Pre-Kindergarten (PK) to grade 8 students at the Bayshore School.[66] The entirety of the Baylands is within the Jefferson Union High School District for grades 9–12. To accommodate students generated by Baylands development, a grade 6-8 middle school is proposed to be constructed near Main Street within the Bayshore School District portion of either (1) Block 6, 9, or 10 of the Roundhouse District or (2) Block C2 within the Icehouse Hill District in the area west of Roundhouse Park and the Ecological Park. When it is completed, all

[65] Small wireless facilities are defined in 47 C.F.R. § 1.6002 as "facilities that meet each of the following conditions:

(1) The facilities …
  (i) Are mounted on structures 50 feet or less in height including their antennas as defined in § 1.1320(d); or
  (ii) Are mounted on structures no more than 10 percent taller than other adjacent structures; or
  (iii) Do not extend existing structures on which they are located to a height of more than 50 feet or by more than 10 percent, whichever is greater;
(2) Each antenna associated with the deployment, excluding associated equipment (as defined in the definition of antenna in § 1.1320(d)), is no more than three cubic feet in volume;
(3) All other wireless equipment associated with the structure, including the wireless equipment associated with the antenna and any pre-existing associated equipment on the structure, is no more than 28 cubic feet in volume;
(4) The facilities do not require antenna structure registration under part 17 of this chapter;
(5) The facilities are not located on Tribal lands, as defined under 36 CFR 800.16(x); and
(6) The facilities do not result in human exposure to radiofrequency radiation in excess of the applicable safety standards specified in § 1.1307(b)."

[66] The portion of the Specific Plan area along Industrial Way is within the Brisbane School District for grades Pre-Kindergarten through 8.

Bayshore School District grade 6–8 students would attend the new middle school within the Baylands. All grade PK–5 students within the Bayshore District would attend the Bayshore School, which would be modified for use solely as an elementary school.

State and District approval of the proposed grades 6–8 school within the Baylands is required, and a school site suitability assessment report will need to be prepared pursuant to the state school site approval process.

Fire and Police Protection Facilities

Although the Specific Plan is silent in relation to fire and police protection facilities, a fire protection plan is proposed by the North County Fire Authority and the City of Brisbane, which includes relocating the City's existing station and adding a new station within the Baylands (see Section 3.3.3, below, and Appendix N.1). In addition, the Brisbane Police Department developed a Police Facilities and Staffing Plan (Appendix N.2), which determined that the Department would need to move to a two-beat patrol system and establish a new police substation within the Baylands.

City of Brisbane Fuel Supply Tanks

As part of its ongoing emergency preparedness planning, the City is proposing installation of one 2,000-gallon ethanol/2,000-gallon diesel above-ground storage tank and two 1,000-gallon mobile propane tanks at the Public Works corporation yard within the Baylands. The ethanol/diesel tanks would be used daily by the Brisbane Police and Public Works departments, as well as by the North County Fire Authority. The emergency tanks would provide approximately 72 hours of emergency fuel demands.

n. Consistency with Sustainability Framework Principles

The Specific Plan proposes measures to address the Brisbane General Plan and Measure JJ requirement that Baylands development be consistent with the principles of the Sustainability Framework for the Brisbane Baylands. The Sustainability Framework presented in the Specific Plan is organized to reflect the 10 "One Planet" principles defined in 2003 by Bioregional, a UK-based non-profit, as a framework for sustainable living that formed the basis for the City's 2015 *Sustainability Framework for the Brisbane Baylands*. **Table 3-6**, below, identifies each of the 10 Sustainability Framework principles, along with related Specific Plan principles and sustainability strategies.

o. Restoration of the Historic Roundhouse[67]

Listed on the National Register of Historic Places, the historic Roundhouse exemplifies brick roundhouses built by Southern Pacific Railroad in the late 19th and early 20th centuries. The Specific Plan proposes rehabilitation consistent with Secretary of Interior Standards and adaptive use of the Roundhouse. The Specific Plan's land use plan places the Roundhouse within a 3.5-acre circular park echoing the building's form. Roundhouse Park is, in turn, proposed to connect to the Ecological Park and Baylands Park greenways to encourage walking to explore this cultural heritage site from sites throughout the western portion of the Baylands.

Table 3-6: Sustainability Goals, Performance Standards, and Strategies Described in the Specific Plan for Baylands Development to Achieve One Planet's 10 Sustainability Principles

Sustainability Framework Principle	Proposed Specific Plan Sustainability Principle and Implementation Strategies
Zero Carbon Buildings	**Principle** Make buildings more energy efficient and deliver all energy with renewable technologies. **Strategies** Carbon emissions reductions will be achieved through energy conservation and building efficiency measures and a combination of planning elements, such as transit and pedestrian design features to reduce automobile use, landscaping and lighting designs that reduce energy and water use, and building design standards to reduce energy and water usage. A minimum of 85,000 MWh of electricity annually[a] are proposed to be generated by on-site solar panels installed on buildings and in parking areas, and in a solar farm developed east of the Caltrain right-of-way south of Visitacion Creek. The Specific Plan also provides for distributed battery storage and a utility scale battery storage facility. Electricity needed at the Baylands in addition to that generated on-site is proposed to be 100% from renewable sources. No natural gas infrastructure is proposed within the Baylands.
Zero Waste	**Principle** Reduce waste, re-use and recycle where possible, and send zero waste to landfills. **Strategies** Baylands construction projects are proposed to recycle and/or salvage for reuse a minimum of 65% of nonhazardous construction and/or demolition waste and will reuse 100% of non-hazardous soils excavated during grading operations on-site. Operational solid waste reduction is proposed to consist of informational and technical assistance programs, installation and use of pet waste collection systems, and zero waste programs implemented by Recology for the City and County of San Francisco.

[67] Analysis of the Specific Plan's impacts in relation to the historic Roundhouse is provided in Draft EIR Section 4.7, *Cultural and Tribal Cultural Resources*, Impact CUL-1.

Sustainability Framework Principle	Proposed Specific Plan Sustainability Principle and Implementation Strategies
Sustainable Transportation	**Principle** Reduce the need to travel, encouraging walking, cycling, and low carbon transport. **Strategies** The Baylands Specific Plan proposes a mix of commercial, residential, retail, and recreational uses in a transit-served location. A network of pedestrian and bicycle routes are proposed that connect to regional systems. The Specific Plan proposes electric vehicle (EV) charging infrastructure, a fare-free shuttle system, secure bike parking, and other features to reduce automobile use and fossil fuel consumption. The Specific Plan establishes a maximum number of permitted parking spaces to encourage use of transit and non-motorized travel, as well as to reduce the presence of automobiles within the Baylands. Transportation demand management programs with a target of reducing automobile travel by 25% are proposed to be prepared on a site-specific project by site-specific project basis.
Local and Sustainable Materials	**Principle** Use materials from sustainable sources and promote products which help people reduce consumption. **Strategies** The Specific Plan establishes metrics for local and sustainable materials, with tracking for both health and embodied carbon.
Local and Sustainable Food	**Principle** Promote sustainable humane farming and healthy diets high in local, seasonal organic food and vegetable protein. **Strategies** The Specific Plan proposes permitting food trucks and supporting a farmers' market within the Baylands to support local food suppliers along with encouraging food retailers to source local, sustainable, and organic food products. The Specific Plan also permits community gardens to the extent permitted by approved remediation plans.
Sustainable Water	**Principle** Use water efficiently, protect local water resources and reduce flooding and drought. **Strategies** Water conservation is required for indoor building use and for outdoor landscaping. A dual water system providing for recycled water to be used for outdoor irrigation and designated indoor uses within commercial buildings will be constructed. Once the Baylands development generates a wastewater flow of 0.22 million gallons per day (approximately 20% built out), a water recycling facility will be constructed and operational, at which time potable water would not be used for non-potable purposes. Finished site elevations have been designed to protect against flood risks including risks from sea level rise through the Year 2100 and programs are included in the Specific Plan to protect surface water quality during and after site construction. The Specific Plan's open space program includes provisions for sea level rise resiliency, including protection of 26 acres of existing land area subject to sea level rise through the Year 2100.

Sustainability Framework Principle	Proposed Specific Plan Sustainability Principle and Implementation Strategies
Open Space and Habitat	**Principle** Protect and restore biodiversity and natural habitats through appropriate land use and restoration of habitat and wetland areas. **Strategies** Approximately 29.5% of the Year 2100 land area within the Baylands will be retained in open space, parks, trails, wetlands and habitat, and similar uses.[b] The Specific Plan also preserves the Brisbane Lagoon as open space and restores critical butterfly habitat. Although removal of wetlands is required for site remediation activities, the Specific Plan proposes establishment and maintenance in perpetuity of new wetlands within the Baylands. Specific Plan development is proposed consistent with remediation of operable units OU-SM and OU-2 in accordance with the Remedial Action Plans approved by the Regional Water Quality Control Board and Department of Toxic Substances Control, as well as Title 27-compliant landfill closure in accordance with the Final Landfill Closure Plan approved by the Regional Water Quality Control Board.
Culture and Heritage	**Principle** Nurture local identity and heritage and support the arts. **Strategies** The historic Roundhouse will be rehabilitated for community uses, and a public art program will be implemented.
Economic Vitality with Equity and Ecology	**Principle** Create an ecologically based economy that supports equity and inclusive communities. **Strategies** The Baylands Specific Plan proposes development of the underutilized, contaminated Baylands site into a diverse, mixed-use, sustainable new community with a mix of housing product types to help address an acute regional and state-wide housing shortage while creating a fiscally positive development for the City, including new commercial and hotel uses. Further, new public parks and other amenities will be provided and maintained at no cost to existing city residents and businesses.
Recreation, Health, and Happiness	**Principle** Encourage active, social, meaningful lives to promote good health and wellbeing. **Strategies** The Specific Plan proposes a comprehensive system of active and passive recreational facilities, including outdoor recreation areas, community greens, and urban plaza; private recreation areas within site-specific residential developments; and a system of shared use paths, bicycle facilities, sidewalks, and "green streets," along with off-site pedestrian/bicycle facilities throughout the Baylands that connect to Central Brisbane.

SOURCE: The Baylands Specific Plan, 2025.

NOTES:

a. The anticipated mix of building types that would result from Baylands development along with the proposed 55-acre solar field are anticipated to generate approximately 92.445 MWh of electricity annually.
b. As shown in **Table 3-1**, 157.0 acres of the Baylands 532.3 acres of Year 2100 land area are proposed for open space uses.

The Roundhouse design scheme proposes reusing the existing enclosed structure (east side) as programmed space while reusing the existing open-air part of the structure (west side), which was previously damaged by fire, as a semi-enclosed unprogrammed space (see **Figure 3-50**). Interior design and proposed uses would follow the structure's original column grid and take advantage of existing column locations to create program use separation walls.

The proposed adaptive reuse program provides for a community center, railroad museum, café, and open-air theater in conformance with the Secretary of Interior's *Standards for Rehabilitation*.

In addition, the Specific Plan proposes interpretive design and choice of landscape materials and features that help tell the story of how the turntable pit, "whisker tracks" emanating from the turntable, and other features contributed to the historic use of the Roundhouse.

To provide for protection and rehabilitation of the historic Roundhouse, the applicant commissioned preparation of a Stabilization Plan and Rehabilitation Study (Page & Turnbull 2020) to provide recommendations for:

- Preventing further deterioration of the structure due to water penetration, vandalism, infestation, or overall neglect;
- Protecting the structure from anticipated sea level rise and flooding;[68] and
- Rehabilitating the structure as a community asset.

While the final programming of uses and interior design for the rehabilitated Roundhouse would be determined and submitted for City review prior to approval of permits for grading the Roundhouse site and lifting or deconstructing the existing structure, the Specific Plan proposes the following scenario for use of the rehabilitated Roundhouse:

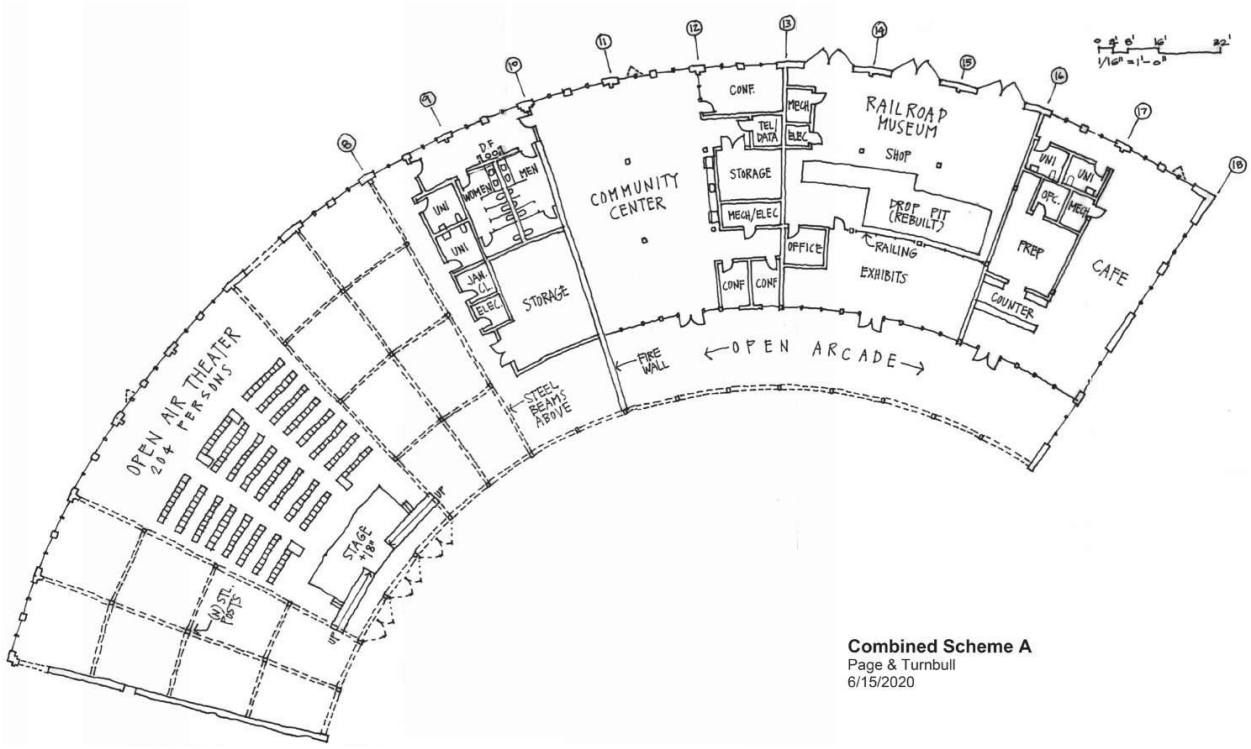
- Open air theater with flexible seating and stage, approximately 4,700 square feet of seating for approximately 200 persons.
- Community Space, approximately 3,700 square feet.
- Railroad Museum, approximately 3,700 square feet.
- Café, approximately 2,400 square feet.
- The rehabilitation design scheme also proposes restrooms, utility space, storage space, and a covered arcade space at the southeastern (park) side of the building that could accommodate outdoor seating for various programming uses.
- Based on the recommendations of the *Brisbane Bayshore Roundhouse Stabilization and Rehabilitation Plan*, the Specific Plan proposes the Roundhouse site would be raised, and the structure would be lifted or deconstructed piece-by-piece and reconstructed at a higher elevation on a new foundation to accommodate sea level rise following site grading. Comprehensive materials testing would be undertaken prior to lifting or deconstructing the Roundhouse to inform the strategy for subsequent restoration and retrofit.

[68] As noted on page 5 of the *Baylands Bayshore Roundhouse Stabilization and Rehabilitation Plan*, the Roundhouse structure and the majority of the proposed Roundhouse Park site are to be affected by an anticipated 6.9 feet of sea level rise. In addition, the Federal Emergency Management Agency (FEMA) has determined that the Roundhouse site has a 0.2 percent annual chance flood hazard. Per the National Park Service Guidelines on Flood Adaptation for Rehabilitating Historic Buildings, the Roundhouse site is within an "established flood risk level." The applicant thus proposes applying these guidelines in the rehabilitation of the Roundhouse.

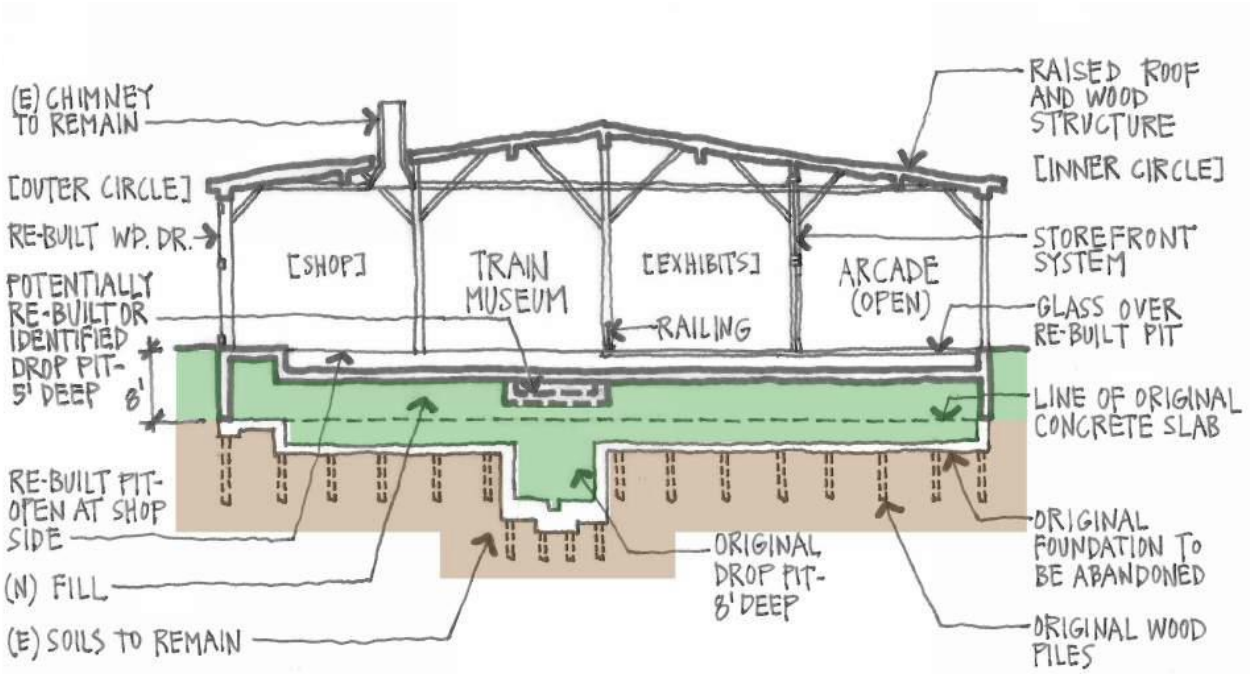
The stabilization and restoration of the Roundhouse is proposed to be completed in five increments:

1. **Safety and Security:** The initial increment of Roundhouse stabilization and rehabilitation would include fencing the site, installing security measures to prevent unwanted access, mitigating imminent hazards, and removal of pests and plants. This increment is proposed to be initiated prior to Specific Plan approval.
2. **Initial Stabilization:** Once security measures have been installed and imminent hazards have been mitigated, the applicant proposes temporarily "mothballing" the Roundhouse to prevent further damage and deterioration. This would include protecting the structure from further moisture penetration and plant and pest infestation, as well as stabilizing the structural components against wind and seismic forces. These stabilization measures are expected to be in place for two to three years.
3. **Raising the Building and Re-Grading the Site:** In response to expected sea level rise, the Roundhouse site would be raised, and the structure would be lifted or deconstructed piece-by-piece and reconstructed at a higher elevation on a new foundation. Comprehensive materials testing would be undertaken prior to lifting or deconstructing the Roundhouse to inform the strategy for subsequent restoration and retrofit.
4. **Second Stabilization:** After the site has been raised, a new foundation would be constructed, and the Roundhouse structure would be connected to or rebuilt atop the new foundation. Some portion of the final retrofit would be installed at this time to stabilize the structure, such as columns that need to be attached to the new foundation, steel framing to brace the brick walls, and repairs to wood roof framing would be installed at this time to stabilize the structure. Protection against moisture and infestation would then be reinstated (similar to the initial stabilization) while awaiting final restoration.
5. **Final Restoration and Retrofit:** The final restoration of the Roundhouse is proposed to include a seismic retrofit and strengthening of the gravity system using the California Historic Building Code to extend the life of the Roundhouse and provide appropriate seismic safety for use and occupancy.

Figure 3-50: Conceptual Rehabilitation of the Historic Roundhouse



CONCEPTUAL FLOOR PLAN



TRANSVERSE SECTION

SOURCE: Page & Turnbull, *Baylands Bayshore Roundhouse Stabilization and Rehabilitation Plan*, November 2020.

p. Site Preparation and Grading

Buildout of the Baylands Specific Plan is anticipated to involve three distinct activities, collectively referred to and analyzed in Chapter 4 as "construction."

- Site preparation, including demolition of existing buildings and removal of existing vegetation and infrastructure in areas to be graded;
- Grading; and
- Construction of infrastructure, buildings, and on-site amenities.

Site Preparation

Preparation of the Baylands for development includes demolition and deconstruction of non-historic buildings, site structures (retaining walls, utility structures), streets and pavement, existing utilities, and landscape elements that are incompatible with the proposed land development program and design. The historic Roundhouse structure will be dismantled for future restoration following site grading. Non-historic buildings and structures to be removed are primarily of wood, masonry, and concrete construction and were formerly used for administration, railyard maintenance, and industrial operations. These include:

- Industrial buildings along Bayshore Boulevard and Industrial Way;
- Buildings along Tunnel Avenue except for structures within the Golden State Lumber site, which would remain;
- Industrial buildings along the south side of Beatty Avenue; and
- Structures within the former landfill footprint.

Demolition and deconstruction are proposed to occur in phases in conjunction with required environmental remediation and landfill closure, proposed site grading, and building construction.

Site Grading

To achieve planned proposed finished grades within the Baylands, a mass grading operation will be undertaken, including approximately 4,300,000 cubic yards of cut within the eastern portion of the site, approximately 1,800,000 cubic yards of which would be temporarily moved to enable construction of an impermeable landfill cap, and then placed within the eastern portion of the site as engineered fill. The remaining 2,500,000 cubic yards of soil cut from the eastern portion of the site would be transported to the western portion of the site and placed as engineered fill. Proposed finished grades are illustrated in **Figure 3-51** and **Figure 3-52**.

Figure 3-51: Proposed Grading East of the Caltrain Right-of-Way

Figure 3-52: Proposed Grading West of the Caltrain Right-of-Way

Excavation of the estimated 4,300,000 cubic yards of soil within the eastern portion of the site is proposed to commence within the Sustainability District and proceed to the created wetlands and stormwater treatment facilities. Excavation activities would then continue within the Sustainable Infrastructure land use designation. The last area to be graded for development purposes following landfill closure is proposed to be the East Campus area.

To achieve proposed finished grades within the western portion of the Baylands, approximately 10,000 cubic yards would be cut and approximately 2,500,000 cubic yards of soil would be moved from the eastern portion of the Baylands. Grading operations within the western portion of the site would be undertaken on a phased basis from south to north.

Due to potential soil loss and compaction during grading operations, up to an additional 400,000 cubic yards of soil is assumed to be moved from the eastern to the western portion of the Baylands from the eastern portion of the site. Thus, the Specific Plan states that while 2,500,000 cubic yards of soil are anticipated to be moved from the eastern to the western portion of the Baylands, up to 2,900,000 cubic yards of soil may ultimately be moved from east to west during mass grading operations. Import or export of fill material into or outside of the Baylands for site development is not anticipated.

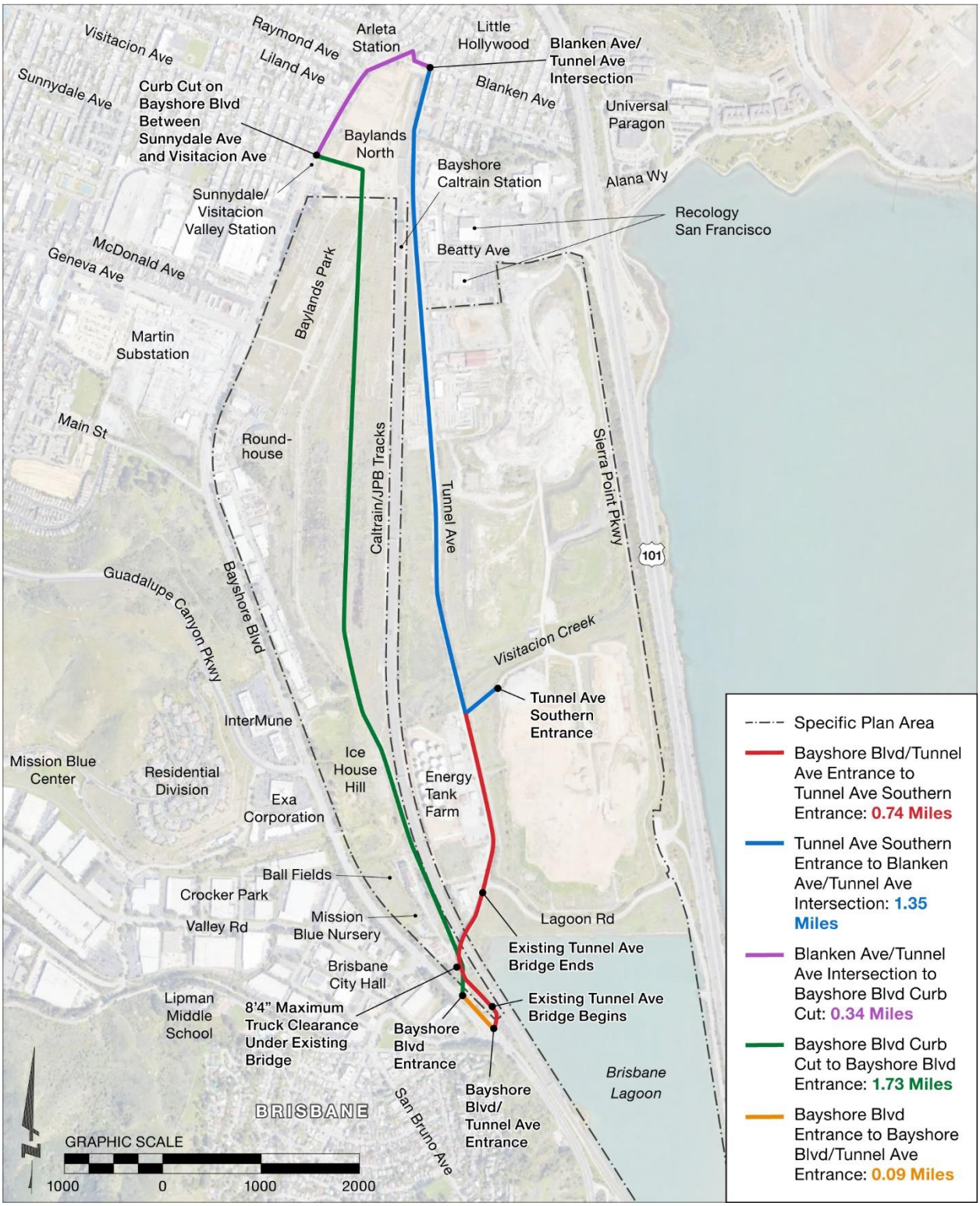
Soil materials to be moved from the east side of the Baylands to the west side will be hauled by trucks following a 3.8-mile route using a combination of off-road haul routes and public streets indicated in **Figure 3-53**. The movement of these soils is anticipated to occur over a two-year, 10-month period. During peak times for site grading, approximately 640 daily round trip truck hauls would occur, including approximately 160 round trip truck hauls in the AM peak hour and 160 round trip truck hauls in the PM peak hour.

Proposed Grading East of the Caltrain Right-of-Way

As shown in **Figure 3-51** and Appendix A of the *Brisbane Baylands Infrastructure Plan*, the applicant proposes finished pad and open space grades within the eastern portion of the Baylands between elevations 17 to 51 feet above mean sea level (AMSL) at construction and prior to settlement occurring, with some grades set lower to match existing conditions. Roadway grades generally sawtooth between elevations 12 and 58 feet AMSL, and drain toward:

- The Brisbane Lagoon;
- The drainage channel adjacent to the US 101 freeway, which would remain at its current elevation; and
- The re-constructed Visitacion Creek.

Figure 3-53: Proposed Grading Haul Routes



Proposed Grades adjacent to the Kinder Morgan Tank Farm and Golden State Lumber Sites

Existing grades around the Kinder Morgan Tank Farm range between elevations 13 and 19 feet AMSL, and between elevations 14 and 20 feet AMSL at Golden State Lumber. The Caltrain rail line through the Baylands ranges between elevations of 10 and 20 feet AMSL. The applicant proposes maintaining existing grades for each of these properties, by ensuring that improvements conform to the existing grade adjacent to the property or alternatively, by implementing retaining structures to maintain the integrity of the existing structures.

Proposed Grading West of the Caltrain Right-of-Way

The proposed grading plan for the western portion of the Baylands is dictated by required capping of the contaminated soil and groundwater, historic structures that are proposed to remain, geotechnical and drainage considerations, and proposed roadway connections to Bayshore Boulevard and across the Caltrain right-of-way.

Proposed Grading of the Historic Roundhouse Site

Existing grades around the existing Roundhouse structure range between elevations 8 and 9.5 feet AMSL. To accommodate site remediation, including required capping of contaminated soils, the applicant proposes to raise the Roundhouse site's finished floor elevation to approximately 18.5 feet AMSL, which would provide a minimum of 1 foot of freeboard above the 100-year storm event hydraulic grade line water elevation with tidal flow and estimated sea level rise for the 2100 Medium-High Risk Aversion estimate. The Roundhouse structure would be dismantled prior to site grading to be reconstructed and restored once grading of that area is complete.

Proposed Grades Adjoining Existing Buildings That Are Proposed to Remain

The applicant proposes to retain the existing grade of the property owned by the Bayshore Sanitary District at the corner of existing Industrial Way and Bayshore Boulevard. Existing buildings would remain at the current elevations with property access provided at the existing grades of these sites. Because this property is located at an existing low point along Bayshore Boulevard, the adjacent land within the Baylands is proposed to be raised and pump stations installed to protect Baylands development from the impacts of anticipated sea level rise.

In addition, existing grades within the eastern portion of the Baylands adjacent to the Kinder Morgan Tank Farm, Brisbane corporation yard, and the Caltrain right-of-way are lower than 100-year flood elevations with the addition of estimated mid-century and Year 2100 sea level

rise. The 2025 Specific Plan proposes leaving these properties and their street access at current elevations.[69]

q. Anticipated Phasing and Sequencing of Baylands Land Development, Infrastructure, and Amenities

Site Remediation and Title 27 Final Landfill Closure

Site remediation and final landfill closure will precede Baylands development. Construction and development within the western portion of the Baylands will occur in increments as site remediation activities are completed. Title 27 landfill closure in the eastern portion of the Baylands will progress in increments as soil materials needed for remediation and development of the former railyard are exported from the landfill to the western portion of the site. Development of the eastern portion of the Baylands would follow export of soils to the western portion of the site and the phased Title 27 landfill closure of the former Brisbane Landfill.

Activities related to site remediation within OU-SM and OU-2, as well as Title 27 landfill closure, are required to be undertaken pursuant to the regulatory authority of the Regional Water Quality Control Board and California Department of Toxic Substances Control as a prerequisite to Baylands development. Because Remedial Action Plans for OU-SM and OU-2 and the Title 27 Landfill Closure Plan were approved by the applicable regulatory agencies, including completion of CEQA documentation, prior to release of this Draft EIR, site remediation and Title 27 landfill closure are not addressed in this Draft EIR as construction impacts. Cumulative environmental effects of site remediation, Title 27 landfill closure, and the proposed Specific Plan are addressed in Chapter 7, *Cumulative Environmental Effects*, of this EIR.

Residential and Commercial Land Development, Infrastructure, and Site Amenities

Construction of buildings and amenities within the western portion of the Baylands along with supporting infrastructure facilities within the eastern portion of the site will precede building construction east of the Caltrain right-of-way. The Specific Plan proposes development of the western portion of Baylands prior to development of the eastern portion of the site. **Table 3-7** identifies the Specific Plan's proposed timing relationship between land development; open space, recreation, and amenities; and roadway improvements. **Table 3-8** identifies the sequencing and timing of Baylands development used for analysis of Specific Plan impacts.

[69] The Baylands Infrastructure Report states, "Raising grades in these areas is constrained by existing improvements that are to remain and the need to avoid causing settlement of the railroad tracks. These properties, if they remain at existing grades, will require measures by others to adapt to future conditions. If required in the future, in response to SLR, drainage systems in these areas can be installed with pump stations and back flow devices in order to protect existing streets and buildings during large storm events, subject to approval of the City of Brisbane and property owners" (BKF 2023).

Table 3-7: Relationship between Land Development; Open Space, Recreation, and Amenities; and Roadway Improvements Phasing

Land Development	Open Space, Recreation, and Amenities	Roadways
Phase I		
Bayshore District • Residential • Commercial	• Sunnydale Park • Baylands Park (north of Geneva Avenue) • Caltrain Station Plaza	• All internal roadways
Roundhouse District • Residential • Commercial	• Baylands Park (south of Geneva Avenue) • Roundhouse Park • Ecological Park (north of Main Street)	• Geneva Avenue (west of Caltrain right-of-way) • All internal roadways
Icehouse Hill District • Residential • Commercial	• Ecological Park (south of Main Street)	• Main Street • All internal roadways
Infrastructure and Amenities Concurrent with Start of Construction • Stormwater Detention Facility To Be Completed Prior to Issuance of a Certificate of Occupancy for the 1,001st Dwelling Unit • Community Fields • West Rail Trail and Connection to the Adjacent Crocker Park Recreational Trail To Be Completed Prior to Issuance of a Certificate of Occupancy for any Commercial Development Exceeding 4.0 Million Square Feet • Geneva Avenue Bridge Crossing and Geneva Avenue east of the Caltrain Right-of-Way • Icehouse Hill Enhancement and Restoration		
Phase II		
Sustainability District	Construction overlaps Phase I	
Campus East District	• *Bay Trail and Visitacion Creek.* Must be completed prior to approval of any building permit exceeding 1.25 million square feet. • *Baylands Preserve and Lagoon Park.* Must be completed prior to approval of any building permit exceeding 2.0 million square feet.	• Tunnel Avenue (intersection improvement at realigned Lagoon Road) • Lagoon Road • Sierra Point Parkway • Visitacion Creek Road • All internal roadways
Other Facilities	***Timing***	
Water Recycling Facility	Facility to be constructed and operational concurrent with the first Baylands recycled water demands, initially drawing raw sewage for treatment as needed from the City and Bayshore Sanitary District.	
Renewable Energy Generation and Battery Storage	Building-mounted facilities to be constructed concurrent with building construction. Solar field to be completed prior to completion of Phase 1 development.	

SOURCE: Baylands Specific Plan, 2025

Table 3-8: Anticipated Construction Sequencing of Baylands Residential and Commercial Buildings assumed for Impact Analysis Purposes

Year Permits Are Issued	Residential (dwelling units)	Year Building Construction Is Complete	Commercial Office (square feet)	Year Building Construction Is Complete
Site Grading		**2025**		**2027**
2027	166	2028	1,424,325	2029
2028	686	2029		
2029	337	2030		
2030	281	2031		
2031	333	2032		
2032	108	2033	1,975,675	2033
2033	124	2034		
2034	165	2035		
2035			1,100,000	2037
Phase 1	**2,200**		**4,500,000**	**2037**
2036				
2037				
2038			1,120,000	2040
2039				
2040			1,380,000	2042
Phase 2			**2,500,000**	**December 2042**
BAYLANDS TOTAL	**2,200**		**7,000,000**	**December 2042**

Development West of the Caltrain Right-of-Way

The area west of the Caltrain right-of-way is identified in the Specific Plan as "Phase 1," and would be developed in multiple increments. Major site infrastructure within the eastern portion of the Baylands, such as the solar field, water recycling facility, and constructed wetlands within Visitacion Creek and Lagoon Park would be installed concurrent with development west of the Caltrain right-of-way to provide recycled water, renewable energy generation infrastructure, drainage improvements, and recreational opportunities.

Following completion of remediation in OU-SM (spanning the Icehouse District and Roundhouse District), fill from the former landfill will be placed first within the Icehouse Hill District to achieve the planned finished grade and geotechnical conditions suitable for development, and then move north into the Roundhouse Hill District. Remediation within OU-SM is required to be completed before the geotechnical ground improvement process commences in the Bayshore District.

The construction of park and trail amenities will begin concurrent with the commencement of placement of soil from the former landfill within the Icehouse Hill District.

Anticipated Sequencing of Development

Area West of the Caltrain Right-of-Way

- Grading and infrastructure construction
    - Approximately 2.5 million cubic yards of soil will be moved from atop the former landfill area in the eastern portion of the Baylands to be placed as engineered fill within the area west of the Caltrain right-of-way to achieve final grades and create building pads.
    - Following site preparation and demolition of existing buildings, grading will be undertaken from south to north, completing building pads and infrastructure improvements for each land use district starting with the Icehouse Hill District and progressing north until building pads for the Bayshore District are completed.
- Building Construction
    - Once building pads are created and infrastructure improvements are installed within the Icehouse Hill District, construction of commercial buildings would be initiated. Building construction within the Roundhouse District and then the Bayshore District will be initiated as grading and infrastructure improvements are completed with anticipated buildout of commercial buildings west of the Caltrain right-of-way.
    - Once building pads are created and infrastructure improvements are installed within the Roundhouse District, construction of residential buildings would be initiated. Building construction within the Bayshore District will be initiated as grading and infrastructure improvements within that District are completed with anticipated buildout of residential development.

Area East of the Caltrain Right-of-Way

- Approximately two months after initiating the export of soil materials from the former landfill area within the eastern portion of the Baylands to the area west of the Caltrain right-of-way, grading of those portions of the Baylands east of the Caltrain right-of-way that are outside of the former landfill's footprint would commence to provide for the subsequent construction of infrastructure improvements within the Sustainable Infrastructure District (e.g., water storage tank, water recycling facility, battery storage).
- Once a sufficient amount of soil has been moved from atop the former landfill, the approximately 1,800,000 cubic yards of soil that is proposed to remain within the former landfill's footprint would be temporarily moved within the landfill footprint to enable

construction of an impermeable landfill cap on top of the municipal waste matrix,[70] and then placed within the eastern portion of the site over the landfill cap as engineered fill to facilitate building construction within the former landfill's footprint.

Once engineered fill is in place over the former landfill, construction of buildings within the Campus East District will commence.

As noted in the Specific Plan, certain infrastructure features and project amenities located in the eastern portion of the Baylands (Phase 2 area) would be constructed concurrent with development within the western portion of the site (Phase 1 area), including:

- Infrastructure features located east of the Caltrain right-of-way to be constructed concurrent with Phase 1
    - Water detention facility
    - Water recycling facility
    - Water storage tank
- Specific Plan amenities located east of the Caltrain right-of-way to be constructed concurrent with Phase 1
    - Lagoon Park
    - Visitacion Creek
- Infrastructure features located to be constructed concurrent with Phase 2
    - Geneva Avenue bridge over the Caltrain right-of-way and easterly extension to the US 101 Candlestick interchange.

Realignment of Lagoon Road to connect directly with the existing southbound US 101 freeway on- and off-ramp.

Development East of the Caltrain Right-of-Way

The Campus East District is planned as the final phase of development, since it can occur only after existing soils overlying the former Brisbane Landfill are transported to the western portion of the Baylands and Title 27 landfill closure is completed. The eastern segment of Geneva Avenue and its bridge over the Caltrain right-of-way are proposed to be constructed prior to issuance of a certificate of occupancy for commercial development in excess of 4,000,000 square feet.

[70] Soils within the former landfill footprint will be removed down to the waste matrix to allow for construction of an impermeable cap. The phased removal of soils and impermeable landfill cap under the regulatory authority and oversight of the Regional Water Quality Control Board and the San Mateo County Health System will be followed by the placement of soil as engineered fill on top of the landfill cap.

The specific timing of Baylands development will be based on market conditions. For example, a portion of the site may be remediated, graded, and have streets and subsurface utilities completed, with actual vertical construction and lateral driveway and utility connections to new structures delayed due to then existing market conditions.

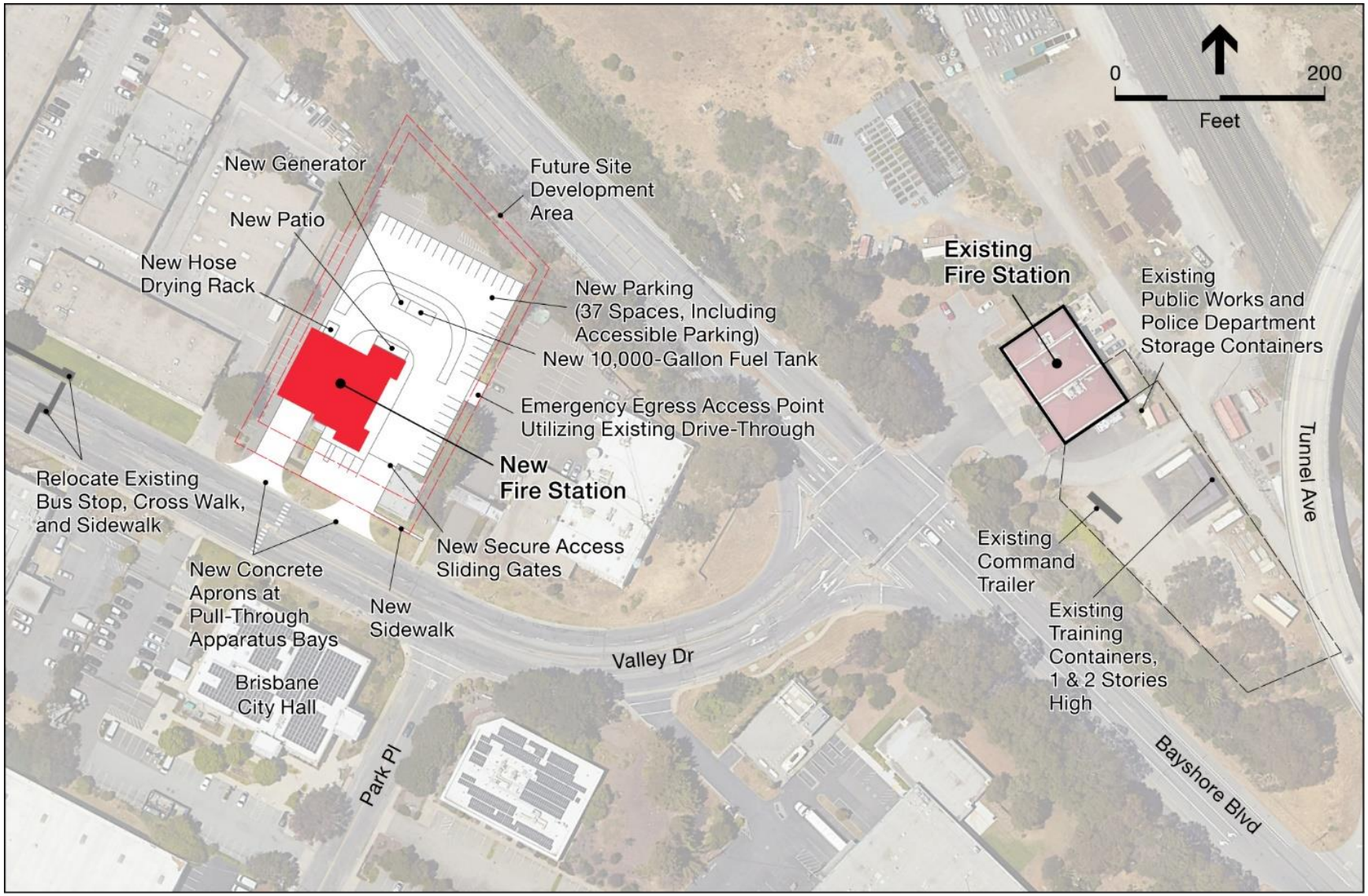
3.3.3 RELOCATION OF THE NORTH COUNTY FIRE AUTHORITY BRISBANE FIRE STATION NO. 81

The North County Fire Authority and City of Brisbane prepared a Fire Protection and Facilities Plan that identifies facilities improvements needed to support Baylands development and maintain fire protection performance standards throughout the City (see Appendix N.2). The North County Fire Authority and City propose relocating the existing Fire Station No. 81 from its existing site at 3445 Bayshore Boulevard to a new 2-story, 10,000-square-foot facility at 140 Valley Drive (see **Figure 3-54**). The existing Fire Station No. 81 site would be used for firefighter training once the new station is operational.

The relocated Station No. 81 would house the existing Engine Company No. 81 and provide training facilities on the second floor that could function as an emergency command center when needed. A 1,000-gallon above-ground tank would be constructed to provide fuel for fire trucks and an emergency power generator. In addition, the relocated fire station would temporarily house a fully staffed (four-person minimum) and equipped ladder truck company until such time as a new fire station within the Baylands would be established. When completed, the new Baylands station would be located adjacent to the west side of the US 101 freeway between Beatty Avenue and the Genera Avenue extension and house the ladder truck company and a squad.[71] The relocated fire station will provide 1:1 replacement of trees removed within the relocation site to the extent compatible with the fire station's emergency services function.

[71] "Squad" refers to a specialized company whose primary focus may be suppression but carry specialized equipment and are trained to perform hazmat, rescue, and other special functions.

Figure 3-54: Proposed Fire Station Relocation Site Plan



SOURCE: North County Fire Authority, Ten Over Studio, 2023.

3.3.4 BAYSHORE MOBILITY PLAN

a. Introduction and Background

The Bayshore Mobility Plan has been proposed by the City of Brisbane to address the effects of regional through traffic within Brisbane and enhance mobility for Brisbane residents and businesses.

General Plan Amendment GP-1-19

In January 2020, the City of Brisbane adopted General Plan Amendment GP-1-19 as a follow-up to General Plan Amendment GP-1-18 and Measure JJ. GP-1-19 states in part, that:

> *"Bayshore Boulevard functions primarily as a regional roadway through the City of Brisbane. Peak hour congestion along Highway 101 causes traffic to be diverted from the freeway onto Bayshore Boulevard through the City of Brisbane as motorists attempt to avoid congested freeway traffic. Depending on the time of day and location, regional through traffic makes up 60 to 80 percent of traffic on Bayshore Boulevard. On a daily basis, only 10 to 15 percent of all trips on Bayshore Boulevard are generated from Brisbane's residential neighborhoods and 15 to 20 percent are generated by Brisbane's employment centers. The majority of traffic on Bayshore Boulevard within Brisbane is between San Francisco and cities to the south, with a smaller amount (approximately 15 percent of all trips) traveling between Daly City and the cities to the south.*
>
> *A principal challenge for the City is maintaining vehicular mobility for Brisbane residents and businesses along Bayshore Boulevard. As large-scale developments occur in cities to the north and south of Brisbane, regional-through traffic and congestion on Bayshore Boulevard is projected to increase. It is also important that Bayshore Boulevard provides safe access and egress for sites located along its frontage while maintaining its ability to move vehicles through the City. Another issue is providing for safe and comfortable access for bicyclists and pedestrians" (City of Brisbane 2020).*

In response to these issues, General Plan Policy C.1 was approved calling for the City's roadway system to be designed "to emphasize mobility for Brisbane residents and businesses, accommodate bicycle and pedestrian in addition to vehicular movement, and provide for comfortable and safe travel within the community to shopping, employment, and recreation, as well as to transit and the Highway 101 freeway."

To implement this policy, General Plan Program C.1.b calls for development of plans for Bayshore Boulevard … "that address the effects of regional through traffic within Brisbane and enhances mobility for Brisbane residents and businesses through a combination of roadway and intersection, transit, bicycle, and pedestrian facility improvements that would not cause a

substantial increase in vehicle miles traveled (VMT) on Bayshore Boulevard or other routes through the City."

The Bayshore Mobility Plan serves as the Bayshore Boulevard design plan required by General Plan Program C.1.b.

Complete Streets Safety Assessment for Bayshore Boulevard

In 2022, a Complete Streets Safety Assessment was conducted by the Safe Transportation Research and Education Center ("SafeTREC") at UC Berkeley in cooperation with the City of Brisbane for the portion of Bayshore Boulevard from San Bruno Avenue to Old County Road. The final recommendations of the study proposed a road diet and a separated multi-use path along the west side of Bayshore Boulevard, along with other improvements within this portion of the corridor.

The Bayshore Mobility Plan builds on the City's 2022 Complete Streets Safety Assessment and expands its recommended road diet, multi-use path along the west side of Bayshore Boulevard, and other improvements north from Old County Road to Geneva Avenue.

b. Purpose of the Bayshore Mobility Plan

The Plan Bayshore Mobility seeks to enhance mobility for Brisbane residents by:

- **Enhancing connectivity for residents and land uses abutting Bayshore Boulevard** such as the Sierra Point Trailer Park on the westside of Bayshore Boulevard just north of San Bruno Avenue.
- **Reducing the prominence of regional through-traffic along Bayshore Boulevard**, making it more of a street serving Brisbane residents.
- **Redesigning Bayshore Boulevard as a multi-modal corridor** to increase the level of comfort and safety for all roadway users including automobiles, emergency response vehicles, transit vehicles, trucks, bicycles, and pedestrians in accordance with General Plan Policy C.1 to "provide for comfortable and safe travel within the community to shopping, employment, and recreation, as well as to transit" and the recommendations of the 2022 Complete Streets Safety Assessment.
- **Increase connectivity between the Baylands and the existing City of Brisbane** for people traveling along and crossing Bayshore Boulevard.
- **Improve the look of the corridor**, providing opportunities for landscaping, gateway features, wayfinding, and other features that increase the prominence of the roadway as a local route for Baylands residents rather than a regional cut-through route.

c. Bayshore Boulevard Design Features

Table 3-9 summarizes proposed design features along the entirety of Bayshore Boulevard within Brisbane. **Figure 3-55a** through **Figure 3-55e** illustrate Bayshore Mobility Plan features. The primary feature of the plan is to reduce the number of travel lanes along Bayshore Boulevard from four lanes (two in each direction) to two lanes (one in each direction) south of Geneva Avenue, along with providing a median, turn pockets, and a multi-use pathway and bicycle facilities along the entirety of the corridor within the City of Brisbane.

Table 3-9: Standard Bayshore Boulevard Design Features

Standard Design Features	
Geometric Design	• Road diet to reduce travel lanes along Bayshore Boulevard from four lanes (two in each direction) to two lanes (one in each direction) south of Geneva Avenue with a median and turn pockets along the entire length of the corridor within Brisbane • Addition of Class I multi-use pathway, with a minimum width of 12 feet and preferred width of 16 feet for a sidewalk level facility • Signage and striping recommendations from the Local Roadway Safety Plan • Improved lighting, including pedestrian-scale lighting along sidewalks and multi-use path • Speed feedback/warning signs
Traffic Signal Considerations	• Signal coordination to allow vehicles to maintain speeds at the posted speed limit • Protected left turn phasing at all intersections • Leading pedestrian intervals at crosswalk locations • Prohibit right turns on red
Emergency Access and Operations	• Traffic signal priority/emergency vehicle pre-emption, median breaks, and queue jumps at intersections to allow emergency vehicles to pass stopped traffic between intersections
Transit Access and Operations	• Traffic signal priority for transit vehicles • Bus boarding islands, 12-foot minimum bus pull out areas, and queue jumps

SOURCE: Fehr & Peers, 2024.

Geometric Design

By removing a travel lane in each direction (i.e., "road diet"), the Bayshore Mobility Plan aims to address the following crash trends identified in C/CAG's Local Roadway Safety Plan:

- Pedestrian/Bicycle Safety
- Nighttime/Low Light Safety
- Motor Vehicle Speed Related Crashes
- High Speed Roadways

Figure 3-55a: Bayshore Mobility Plan – Geneva Avenue to Brisbane Technology Park

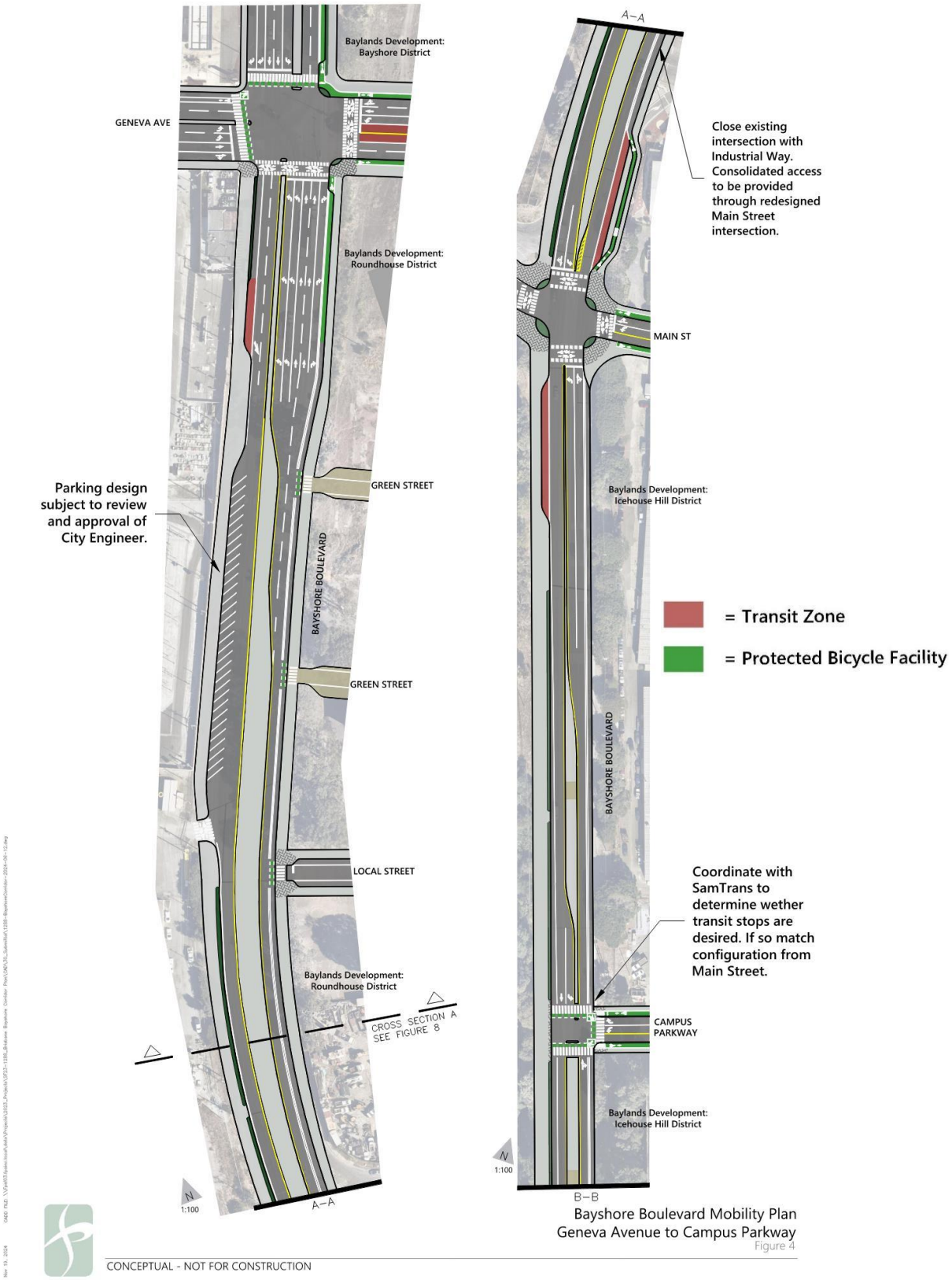


Figure 3-55b: Bayshore Mobility Plan – Brisbane Technology Park to Guadalupe Canyon Parkway

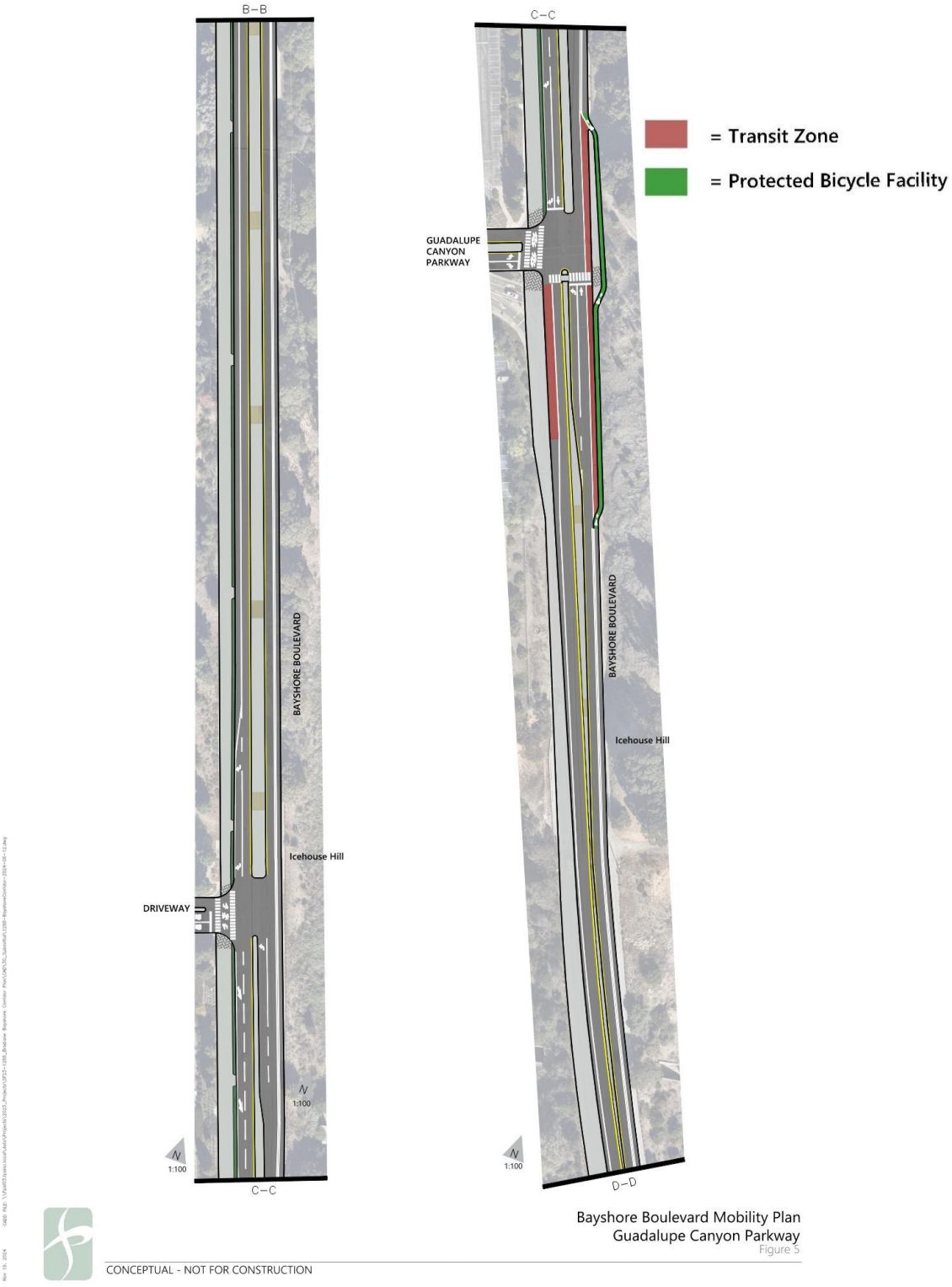


Figure 3-55c: Bayshore Mobility Plan – Valley Drive to Old County Road/Tunnel Avenue Van Waters and Rogers Road South to City Limits

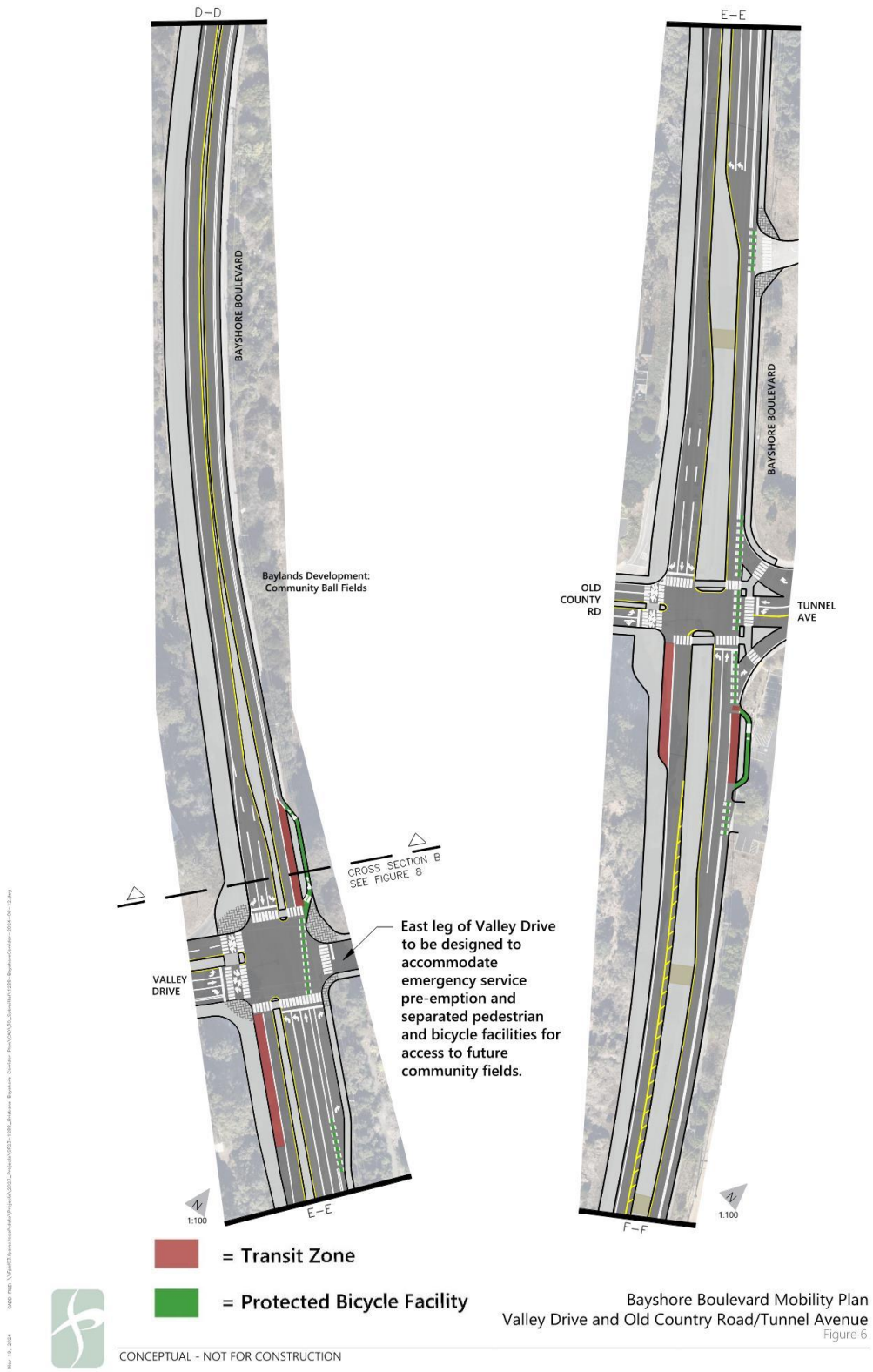


Figure 3-55d: Bayshore Mobility Plan – Van Waters and Rogers Road to San Bruno Avenue

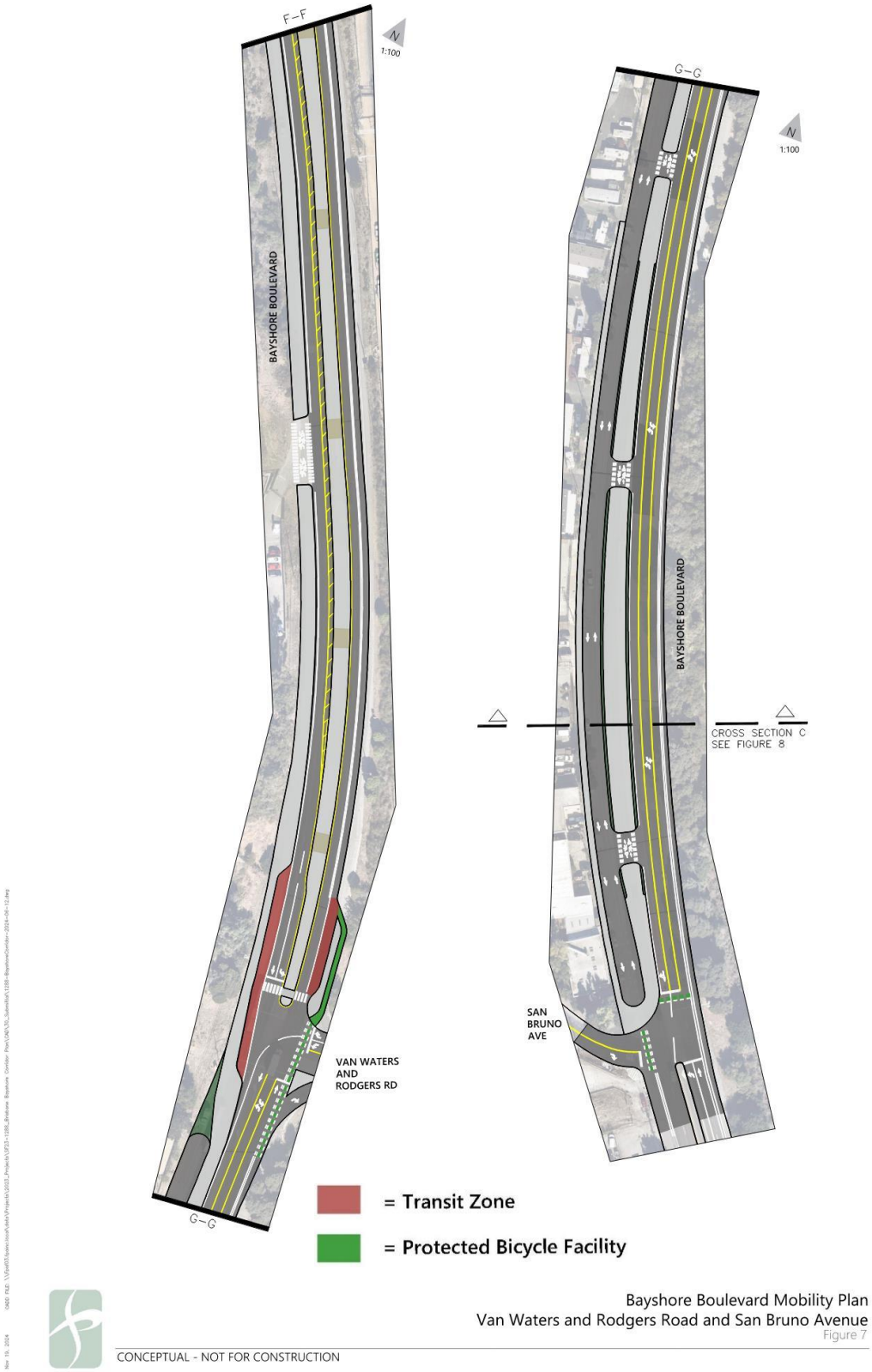
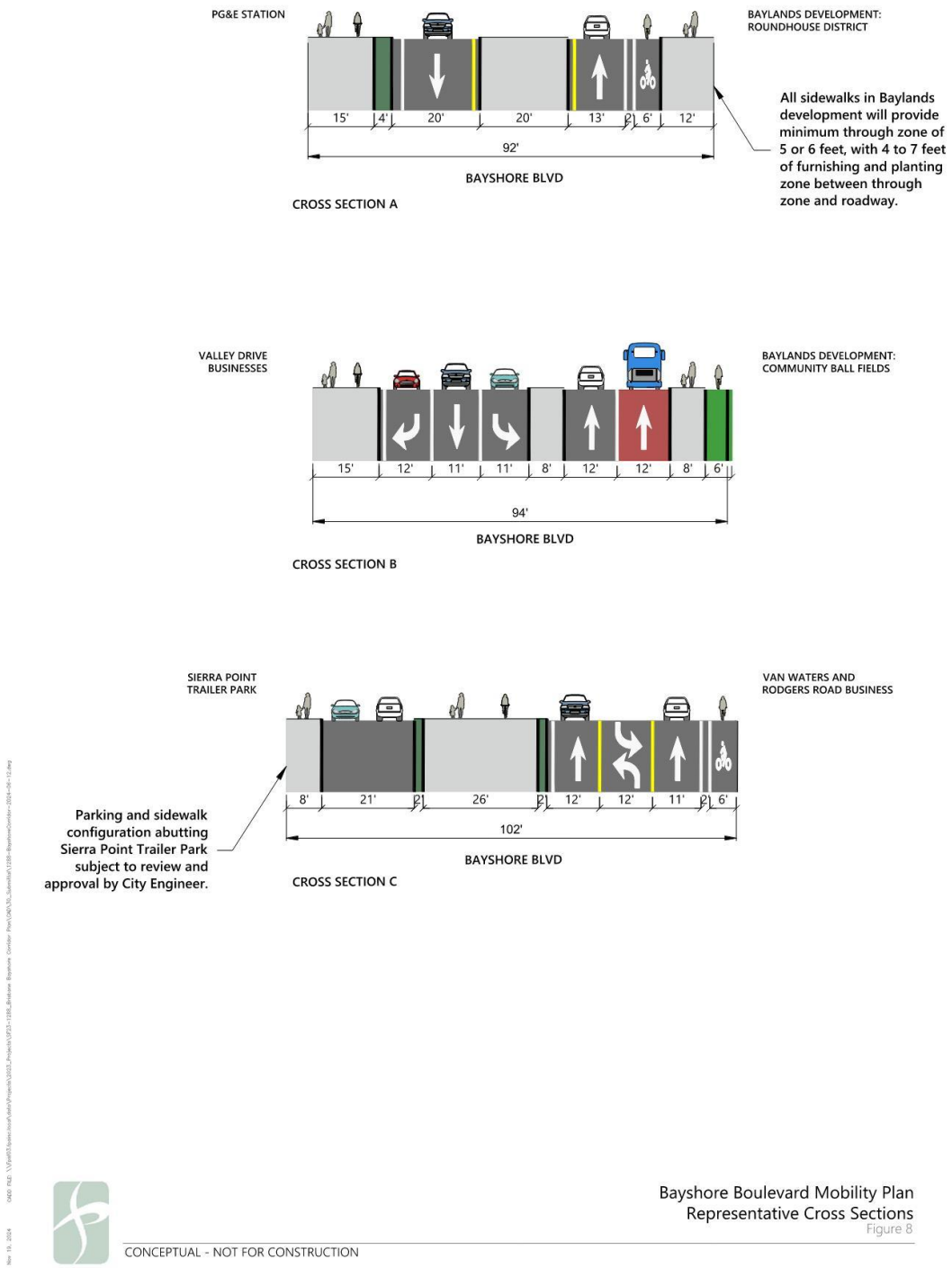


Figure 3-55e: Bayshore Mobility Plan – Cross Sections (see Figures 3-55a, 3-55c, and 3-55d



Reducing the number of lanes along Bayshore Boulevard would reduce the design speed to 35 miles per hour, consistent with other arterials in the Baylands Specific Plan area, and would also reduce the risk of fatal or severe collisions and the desirability of the corridor for regional through traffic.[72] The Mobility Plan would also (1) reduce the number of lane changes motorists would be required to make when turning onto or from Bayshore Boulevard and (2) slow down the speed of vehicles turning onto local streets, minimizing potential points of conflict, and improving traffic flow and the overall safety of the corridor.

By removing one travel lane in each direction, the area currently within the right-of-way would become available for construction of a multi-use Class I path along the west (southbound) side of the corridor to physically separate cyclists and pedestrians from vehicular traffic, thereby reducing the level of traffic stress, providing a safer environment for active transportation, and promoting walking and cycling as viable modes of travel for individuals of all ages and abilities.[73] The existing northbound bicycle lane will remain along Bayshore Boulevard for bicyclists who are comfortable riding adjacent to busy travel lanes, with a wide striped buffer zone to delineate separate spaces for bicyclists and motorists.

The Bayshore Mobility Plan would remove channelized turn lanes that are not required by geometric design and reconfigure those that are required for larger vehicles (such as a truck or fire engine) to make a turn. As a result, potential conflicts between vehicles and pedestrians would be minimized, creating a safer and more accessible environment for all road users. Where free right-turn lanes are to remain, they would be designed to slow vehicle speeds making the turn (FHWA, no date).

Traffic Signal Considerations

The Bayshore Mobility Plan proposes standard safety improvements at all signalized intersections, including features such as protected turn phasing, improved signage, protected pedestrian and bicycle crossings, and signal synchronization for a 35-mph design speed along the corridor. Existing traffic signals would be retimed to reflect the new configuration and would include emergency and transit signal priority measures to enable emergency and transit vehicles to get priority when approaching signals. Traffic signal priority technology will reduce the likelihood of delay for emergency or transit vehicles while removing the need for emergency vehicles to travel through an intersection while the light is red for their approach. Bayshore traffic signals were recently upgraded with new technology that could be leveraged

[72] As noted in C/CAG's LRSP, "Countywide crashes on roadways with posted speeds 40mph or higher had an average crash severity per mile 13 times higher than along roadways with posted speeds of 25 mph or less" and "unsafe speed was the most commonly cited primary crash factor." In Brisbane, "Too fast for conditions" was the top-cited cause of motor vehicle crashes.

[73] Caltrans' guide *Active Transportation Emphasis Area Guidance for Corridor Planning* (February 2022) refers to the NACTO guide found here: https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/active-transportation-complete-streets/20220131active-transportation-emphasis-area-guidance-final-version-v7a11y.pdf.

for the features described in the Mobility Plan as well as other Intelligent Transportations Systems as they become available in the future.

Emergency Access and Operations

The Bayshore Mobility Plan prioritizes emergency vehicle access by providing multiple ways for emergency vehicles to bypass stopped traffic on Bayshore Boulevard. To facilitate emergency vehicle access at intersections:

- Each traffic signal would incorporate signal pre-emption technology that would allow emergency vehicles to trigger a green light as they approach an intersection and thus provide room for vehicle queues to clear and drivers to find space to pull over.
- Each signalized intersection along the corridor would also include bus/emergency vehicle queue space on the right (shared with right-turn pockets were appropriate) that would allow additional room for emergency vehicles to pass where requested by City of Brisbane emergency service providers and approved by the City Engineer.
- The center median and multi-use path will be provided with breaks every 250 feet to allow emergency vehicles to navigate around bottlenecks or congestion for short distances by using the multi-use path or opposite roadway direction.[74] Medians and buffers along the multi-use pathway would be designed and landscaped to provide clear sight lines for emergency vehicles.

Transit Access and Operations

The Bayshore Mobility Plan would provide Transit Signal Priority technology to enhance transit reliability by extending green lights or shortening red lights when a transit vehicle approaches. Transit Signal Priority reduces delays at intersections and wait times for passengers, helps buses adhere more closely to their schedules, and improves service reliability. Bus stops on Bayshore Boulevard would be provided with dedicated loading zones on bus boarding islands. On the west (southbound) side of the corridor, these boarding islands would be adjacent to the multi-use path, and on the east (northbound) side of the corridor, these boarding islands would provide separation for bicyclists. All bus stops would be located on the far side of the intersection in bus pull out areas, except where land use or pedestrian crossing locations would necessitate a near-side stop. Bus stops would also include bus queue jumps[75] to allow for buses

[74] Northbound emergency vehicles would be able to either pass vehicles that pull over into the buffered bike lane or cross to the southbound lane in the median breaks to bypass vehicle bottlenecks. Southbound emergency vehicles would be able to pull into the multi-use pathway or into the northbound travel lane for short stretches to bypass vehicle bottlenecks. The multi-use pathway would be 16 to 18 feet wide, thus providing adequate space for emergency vehicles to travel on for short distances if the other direction is congested.

[75] Bus queue jump lanes combine a short transition area from a bus stop, allowing buses leaving a stop to have priority over vehicular traffic and easily enter traffic flow. Providing buses with a "head start" can significantly improve bus performance, resulting in run-time savings and increased reliability.

to bypass vehicle queues on Bayshore Boulevard where requested by SamTrans and approved by the City Engineer. SamTrans bus stops along Bayshore Boulevard would be provided with all of the amenities recommended in the SamTrans' *Bus Stop Improvement Plan*, such as bus shelters, benches, and real-time information (SamTrans 2024).

Intersection Design Features

Table 3-10 identifies standard intersection treatments to be provided at each intersection along Bayshore Boulevard.

Table 3-10: Standard Intersection Treatments

Standard Intersection Treatments	
Traffic Signal Treatments	• Pedestrian and bicycle signal heads • Protected left turn phasing at all intersections • Emergency vehicle pre-emption and transit-signal priority • Leading pedestrian intervals at crosswalk locations • Signal coordination to maintain vehicle speeds at posted speed limit • Prohibit right turn on red at locations where vulnerable populations may be crossing • Protected bicycle movements for right turns where traffic volumes exceed 150 vehicles
Striping Treatments	• Advance stop bars • High-visibility crosswalks • Conflict markings for bicycles • Two-stage turn boxes for relevant bicycle movements
Hard Infrastructure	• Tighten curb radii to slow vehicle turning speeds while allowing truck turning movements at locations with large numbers of trucks • Curb extensions to reduce the crossing distance for pedestrians • Raised pedestrian crossings for local streets into Baylands • Queue jumps for emergency vehicles and transit services • Removal of channelized right-turn lanes ("Slip Lanes") to reduce conflicts with the west side multi-use path[a]

SOURCES: Fehr & Peers, 2024; FHWA.

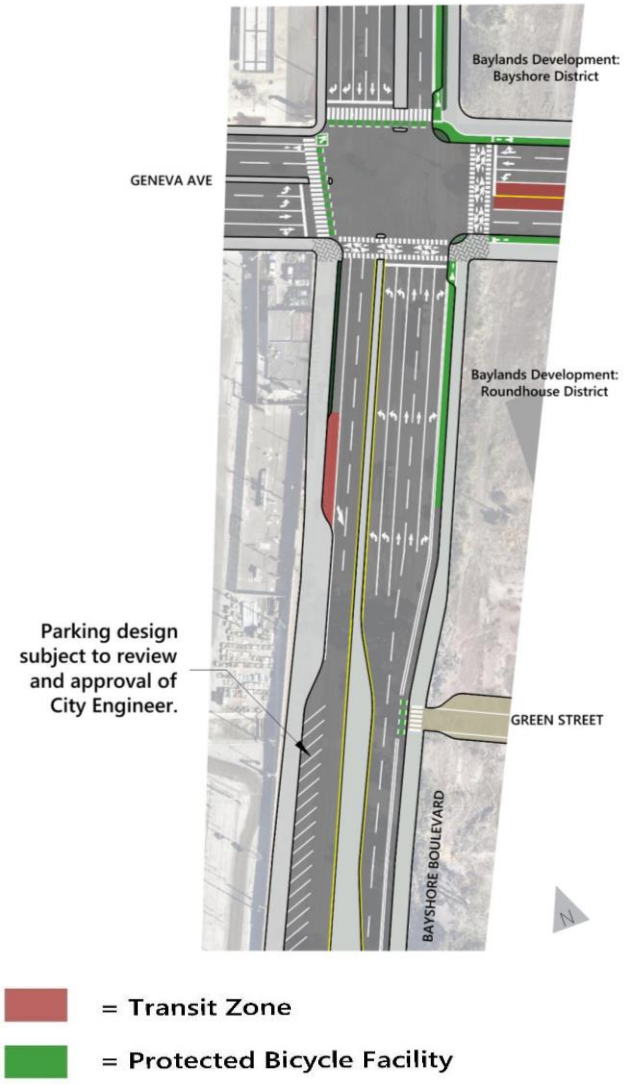
NOTE:

a. Removal of slip lanes is recommended to improve the safety of non-motorized road users. Slip lane removal is recommended at all intersections where the removal will not impede truck access. Slip lanes on the southeast and northeast corners of Tunnel Avenue are recommended to remain. Where slip lanes are to remain, it is recommended that they are designed in a way to slow vehicle speeds (see: FHWA's guidance on Well Designed Right-Turn Slip Lanes, https://safety.fhwa.dot.gov/saferjourney1/Library/countermeasures/15.htm).

Bayshore Boulevard at Geneva Avenue

The road diet for Bayshore Boulevard would start south of the Bayshore Boulevard – Geneva Avenue intersection. **Figure 3-56** presents the conceptual design for Bayshore Boulevard at Geneva Avenue. The road diet for Bayshore Boulevard would start approximately 300 feet south of the intersection of Geneva Avenue. Thus, the north leg of the intersection would remain in its current configuration, with the addition of project frontage features proposed on the east side of the street in the Baylands Specific Plan. The east leg would match the Specific Plan's design for Geneva Avenue and the west leg would retain Daly City's existing lane configuration and geometry.

Figure 3-56: Bayshore Boulevard at Geneva Avenue and Green Shared Street



The south leg of the intersection would match the Specific Plan's proposed configuration, with the road diet and multi-use Class I path along the west side of Bayshore Boulevard beginning south of Geneva Avenue. Protected pedestrian and bicycle crossings would be provided on the east and south legs of the intersection to facilitate travel from the Class IV bicycle facilities on Geneva Avenue to the Class I pathway on Bayshore Boulevard. Crosswalks and painted bicycle striping would be provided on the north and west legs to allow people to reach the existing Class II bicycle facilities on Geneva Avenue. The existing bus stop and on-street parking on the west side of Bayshore Boulevard south of Geneva Avenue in front of the 7 Mile House would remain. Signal timing would provide protected turn phases for turning movements and bus lanes to support the movement of buses between the west and east legs of Geneva Avenue.

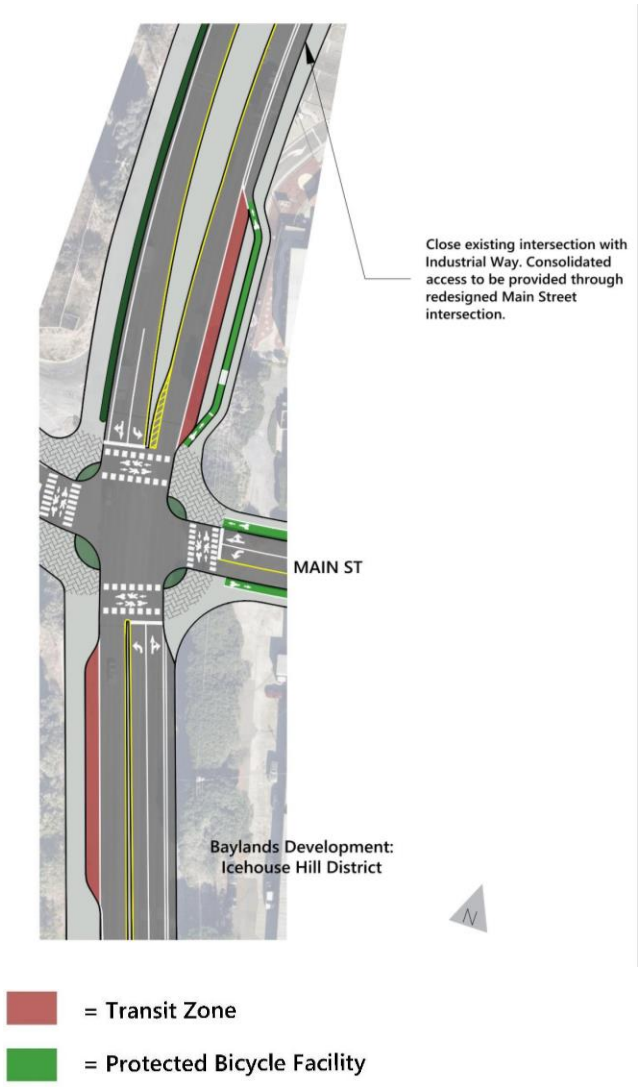
Bayshore Boulevard at Future Baylands Local Streets and Green Streets

The conceptual design for intersections with Baylands local and green streets would match the proposed designs presented in the Baylands Specific Plan and provide for raised crosswalks and right-in and right-out access (see **Figure 3-56**).

Bayshore Boulevard at Main Street and Existing Industrial Way

The existing intersection at Industrial Way would be eliminated. Industrial Way would be provided with a side-street stop-controlled intersection from Main Street (see **Figure 3-57**). This configuration would require shifting the west leg of Main Street south to avoid a skewed intersection. A Class I path would be provided on the north side of Main Street to provide a connection to the Bayshore heights neighborhood of Daly City. Protected pedestrian and bicycle crossings would be provided on the north and east legs of the intersection to facilitate travel from the Class IV facilities on the east leg of Main Street to the Class 1 pathways on Bayshore Boulevard and on the west leg of Main Street. Reconfiguration of the existing skewed configuration would allow the removal of the channelized turn lanes to reduce turning speeds onto Main Street. Reconfigured transit stops would be located on the north side of the new intersection to align with the crosswalk on the north leg, since no sidewalk is provided on the southern side of Main Street on the west leg. The transit stops would be designed with bus pull outs and amenities consistent with SamTrans' *Bus Stop Improvement Plan*, including a northbound bus island with bikeways behind the stop so the Class II bikeway can travel behind the stop. Queue jumps and right-turn pockets could be incorporated if requested by SamTrans or emergency service providers and approved by the City Engineer.

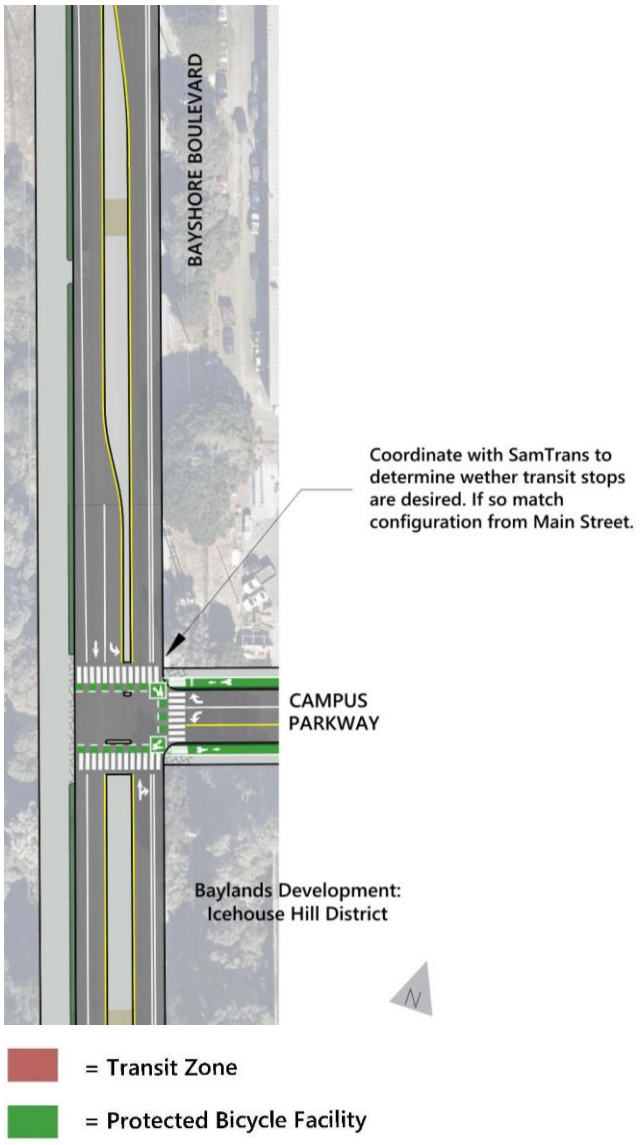
Figure 3-57: Bayshore Boulevard at Main Street and Existing Industrial Way



Bayshore Boulevard at Future Campus Parkway within the Baylands

As shown in **Figure 3-58**, signalized intersection would be provided at Campus Parkway at the proposed Specific Plan. Protected pedestrian and bicycle crossings are provided on the north and east legs of the intersection to facilitate travel from the Class IV facilities on Campus Parkway to the Class I pathways on Bayshore Boulevard and on the west leg of Main Street. Although not proposed in the Specific Plan, bus stops with amenities consistent with SamTrans' *Bus Stop Improvement Plan* and queue jumps could be provided if requested by SamTrans and approved by the City Engineer.

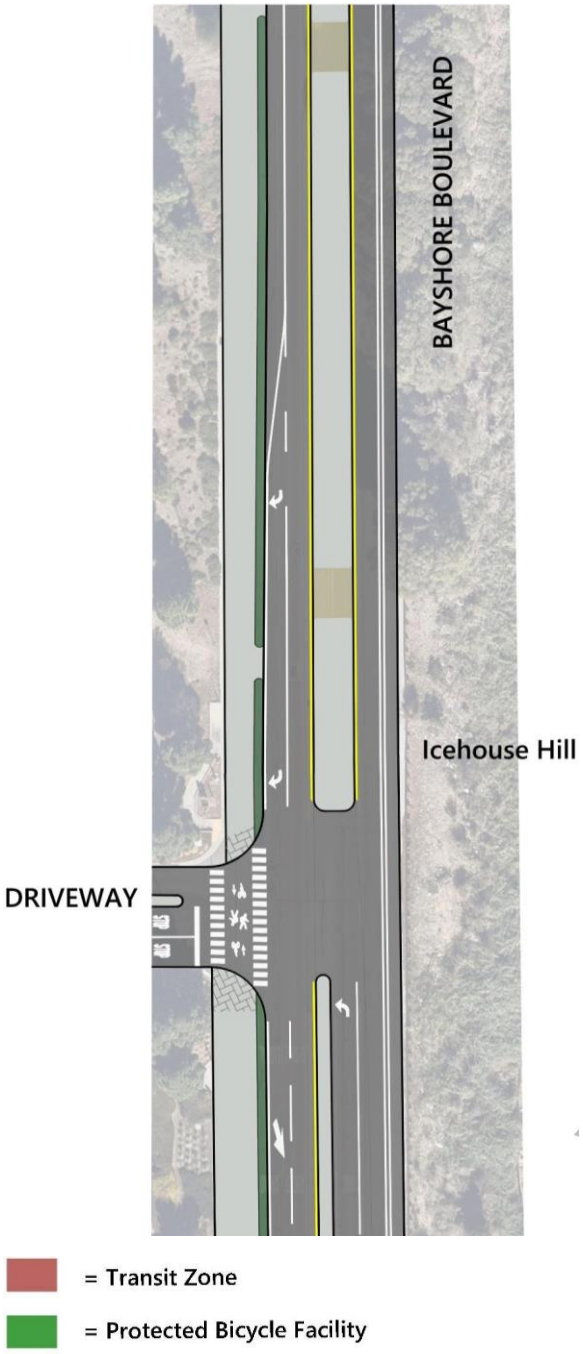
Figure 3-58: Bayshore Boulevard at Campus Parkway



Bayshore Boulevard at the Driveway Entry to the Brisbane Technology Park

As shown in **Figure 3-59**, the conceptual design for the driveway into the Brisbane Technology Park would add a crossing for the new multi-use pathway across the Brisbane Technology Park driveway. The Brisbane Technology Park driveway would maintain all other existing access configurations.

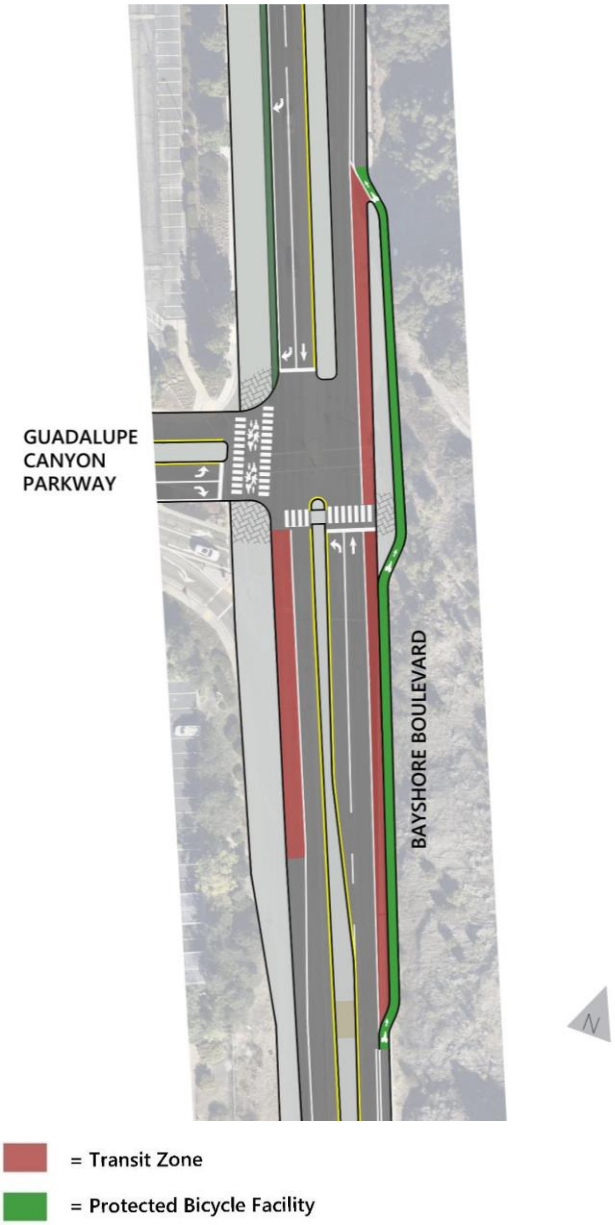
Figure 3-59: Bayshore Boulevard at Technology Park Driveway



Bayshore Boulevard at Guadalupe Canyon Parkway

As shown in **Figure 3-60**, the channelized free right-turn lane at Guadalupe Canyon Parkway would be removed to reduce turning speeds at conflict points for the Class I pathway on the west leg of the intersection. Existing vehicle access would be maintained, although one of the two eastbound left-turn lanes would be removed because there will only be one receiving lane on northbound Bayshore Boulevard. The crosswalk across Bayshore Boulevard would move to the south leg of the intersection so that pedestrians would cross at the same time with right-turning vehicles rather than the faster moving left-turning vehicles. High-visibility crosswalks would be provided across Guadalupe Canyon Parkway and Bayshore Boulevard. Transit stops would remain as far side bus stops and would be designed with queue jumps, bus pull outs, and amenities consistent with SamTrans' *Bus Stop Improvement Plan*. Queue jumps for emergency vehicles and transit vehicles would be provided via the southbound right-turn pocket and a dedicated northbound queue jump shown in red in **Figure 3-60**.

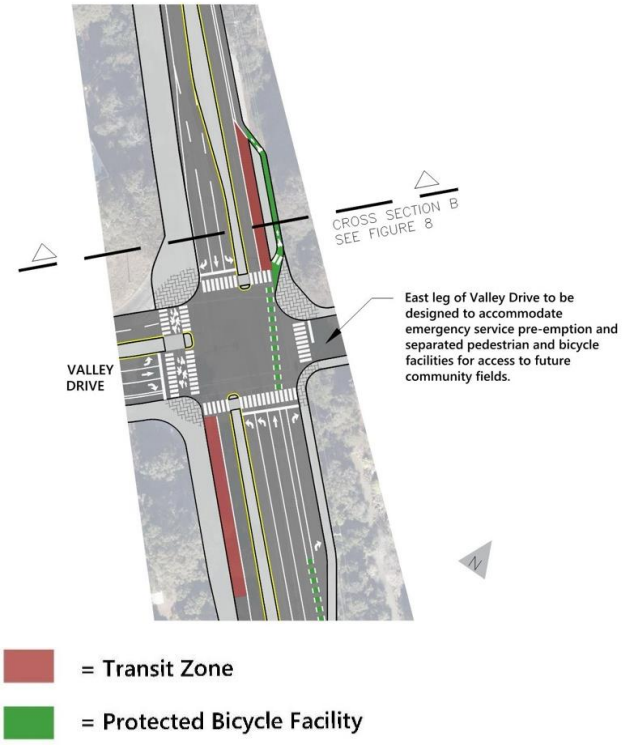
Figure 3-60: Bayshore Boulevard at Guadalupe Canyon Parkway



Bayshore Boulevard at Valley Drive

As shown in **Figure 3-61**, the channelized free right-turn lanes would be removed at the Valley Drive intersection to reduce turning speeds at conflict points for the Class I pathway on the west leg of the intersection. Existing vehicle access would be maintained, although the shared eastbound left-turn lane would be converted to a through-only lane to provide only one lane for left-turning vehicles, which matches the one receiving lane on northbound Bayshore Boulevard. Existing crosswalks would be enhanced to high-visibility crosswalks.

Figure 3-61: Bayshore Boulevard at Valley Drive



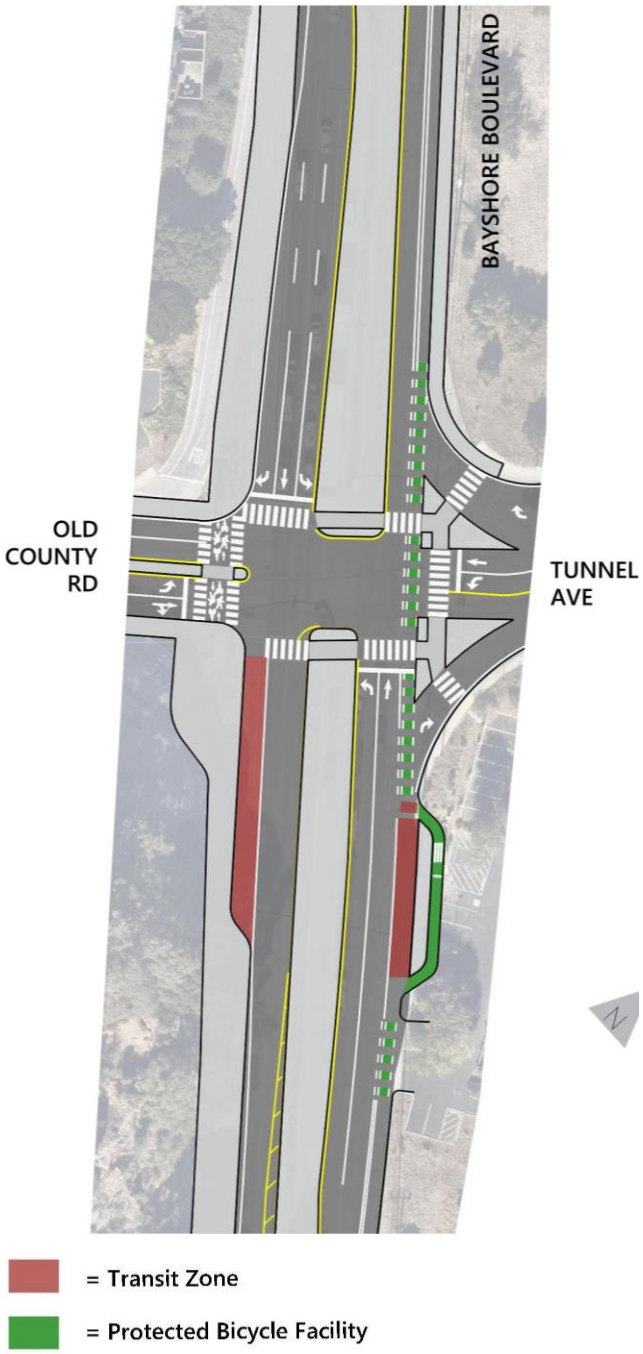
Transit stops would be designed with bus pull outs and amenities to match SamTrans' *Bus Stop Improvement Plan*, including a bus island with bikeways behind the stop. The right-turn pockets could serve as queue jumps for emergency and transit vehicles and would align with the far side transit pull out areas to facilitate a direct line through this intersection. The east leg of Valley Drive would incorporate features to accommodate the mix of emergency service providers, trucks, and people trying to reach the future community fields through emergency vehicle pre-emption and separated pedestrian and bicycle facilities.

Bayshore Boulevard at Tunnel Avenue/Old County Road

The Tunnel Avenue/Old County Road intersection would match the 2022 Complete Streets Safety Assessment (see **Figure 3-62**). Free right-turn lanes would be removed on the west side of the intersection to reduce turning speeds at conflict points for the multi-use pathway. The channelized free right-turn lanes onto Tunnel Avenue would remain on the east side of Bayshore Boulevard given the angle of the intersection approach and the lack of a conflicting Class I pathway. Existing vehicle access would be maintained, and all crosswalks would be enhanced to high-visibility crosswalks.

The transit stops would be designed with bus pull outs and amenities consistent with SamTrans' *Bus Stop Improvement Plan*. This includes a near side stop in the northbound Bayshore Boulevard lane at Tunnel Avenue to provide a direct connection to the park-and-ride lot in the southwest corner of the intersection. A northbound queue jump is not proposed due to the channelized free right-turn lane but could be incorporated within the Bayshore Boulevard footprint if requested by SamTrans or emergency service providers and approved by the City Engineer.

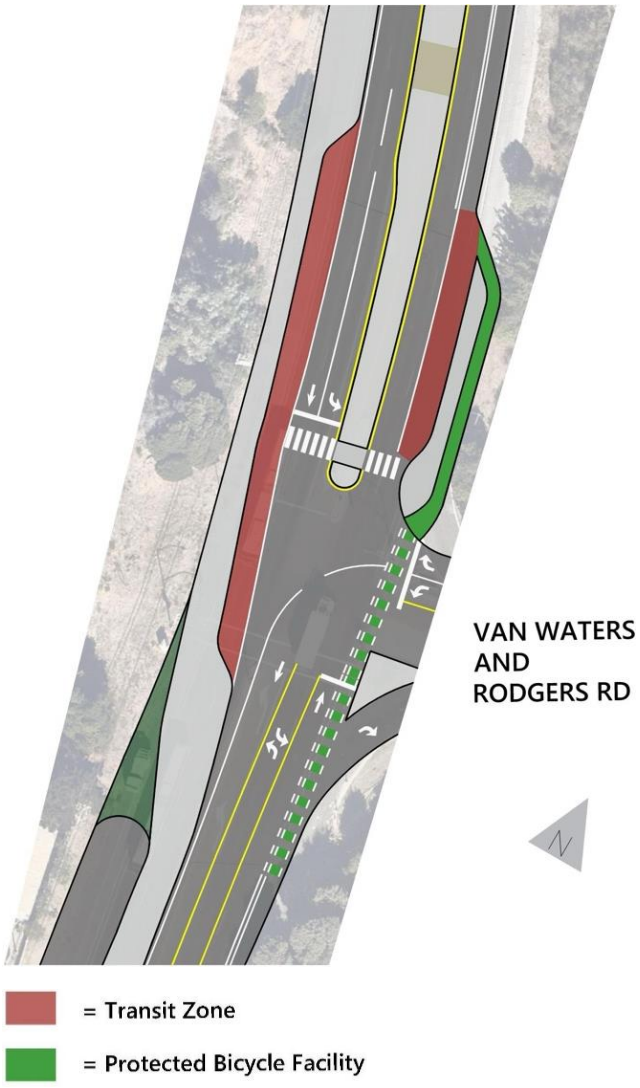
Figure 3-62: Bayshore Boulevard at Old County Road/Tunnel Avenue



Bayshore Boulevard at Van Waters and Rogers Road

This location would match the designs presented in the 2022 Complete Streets Safety Assessment. As shown in **Figure 3-63**, a new high-visibility crosswalk on the north leg of the intersection would replace the existing crosswalk on the south leg. The northbound channelized free right-turn lane at Van Waters and Rogers Road would be removed for a relocated bus stop that aligns with the new crosswalk.

Figure 3-63: Bayshore Boulevard at Van Waters and Rogers Road

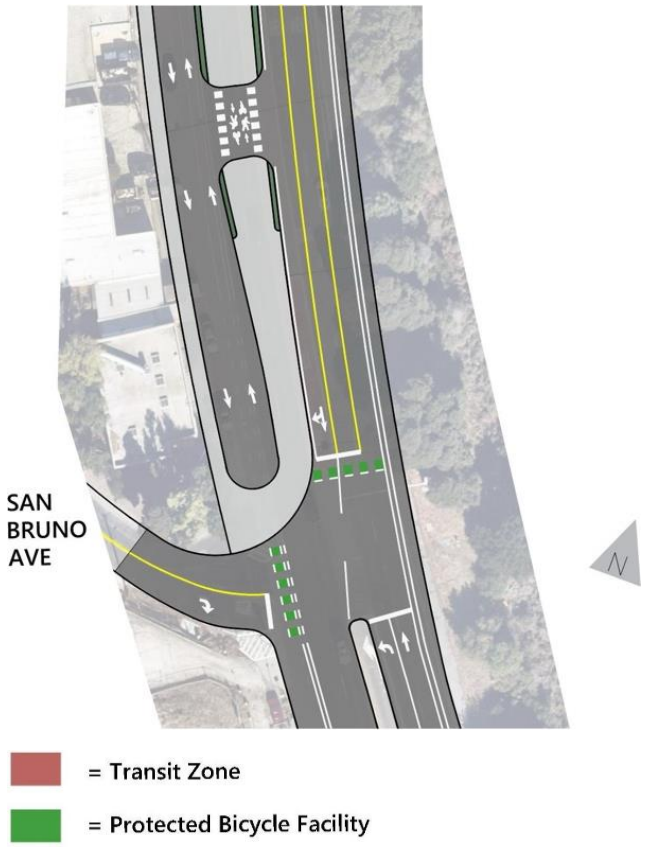


Shifting the crosswalk and bus stop to the north leg of the intersection would improve pedestrian safety by removing conflicts between pedestrians and faster moving vehicles turning left onto southbound Bayshore Boulevard or turning right in a channelized free right-turn lane. The channelized free right-turn lane from northbound Bayshore Boulevard to eastbound Van Waters and Rodgers Road would remain to ensure large vehicles can access the warehousing and distribution facilities on Van Waters and Rodgers. The southbound bus stop would shift to the near side of the intersection, matching SamTrans' *Bus Stop Improvement Plan* due to geometric constraints posed by the access road and parking lane for Sierra Point Trailer Park. A southbound receiving lane through the intersection would allow emergency or transit vehicles to bypass queues on southbound Bayshore Boulevard. A northbound queue jump is not provided due to the channelized free right-turn lane that is required to provide access for large trucks onto Van Waters and Rodgers Road.

Bayshore Boulevard at San Bruno Avenue

The design for San Bruno Avenue (illustrated in **Figure 3-64**) would match the designs presented in the 2022 Complete Streets Safety Assessment except as noted below. Existing turning movements would be retained, including right-turn access only from San Bruno Avenue. Because this intersection represents the southern terminus of the Bayshore Mobility Plan, the road diet and multi-use path would end at San Bruno Avenue. South of the intersection, the roadway would transition to match the existing roadway geometry with two lanes in each direction and the existing Class II facilities on both sides of the corridor. People bicycling would be able to continue south on the existing Class II bicycle lanes. People bicycling northbound would use the two-stage turn queue box at San Bruno Avenue to cross Bayshore Boulevard to reach the Class I multi-use path.

Figure 3-64: Bayshore Boulevard at San Bruno Avenue



3.3.5 NEW MIDDLE SCHOOL WITHIN THE BAYLANDS AND COVERSION OF THE EXISTING BAYSHORE SCHOOL TO AN ELEMENTARY SCHOOL

Baylands development includes a site for a grade 6–8 middle school to be constructed near Main Street within the Specific Plan's Roundhouse or Icehouse Hill District west of Roundhouse Park and the Ecological Park. Upon completion of middle school construction, all Bayshore School District grade 6–8 students would attend the new middle school within the Baylands, and all grade PK–5 students would attend the Bayshore School, which is currently the only school operated by the Bayshore District and would be converted from a PK-8 school to a PK–5 elementary school.

3.3.6 DEVELOPMENT AGREEMENT

The Specific Plan applicant has stated its desire to enter into a Development Agreement with the City to provide a legal instrument that establishes a commitment whereby the City, as the land management agency for the site, agrees to permit the applicant or its successors to develop the Specific Plan under agreed-upon terms, and commits the applicant to the provision of specified public improvements, facilities, services identified in the Specific Plan and required by EIR mitigation measures, along with other public benefits. The Development Agreement would constitute a legal contract between the City and the applicant and commit both parties to the agreed-upon development program, including the Baylands Specific Plan and other agreed-upon public benefits. The Development Agreement would be binding and could exempt the development of the Baylands from future changes to City codes, plans, resolutions, and voter-approved initiatives that might otherwise require revisions to the approved Specific Plan.

3.4 INTENDED USE OF THIS EIR

This EIR is intended to identify and analyze the environmental effects of the development associated with the Brisbane Baylands Specific Plan, including site preparation and grading, building construction, on-site and off-site infrastructure development, and ongoing operations of land uses and facilities proposed in the Specific Plan. The environmental analyses prepared for this EIR have been undertaken at a level of detail commensurate with the information provided by the applicant in the Specific Plan.

This EIR has been prepared by the City of Brisbane, which is the Lead Agency, as a project-level EIR to provide CEQA compliance for the 2025 Baylands Specific Plan project. Pursuant to CEQA, "responsible agencies" from whom further permits or authorizations are needed to implement the Specific Plan and related project components are required to rely on this EIR under routine circumstances.

Additional CEQA review of 2025 Specific Plan project implementation actions by the City as Lead Agency or by responsible agencies is required under Public Resources Code Section 21166 if:

(1) Substantial changes are proposed in the project which will require major revisions of the EIR;

(2) Substantial changes occur with respect to the circumstances under which the project is being undertaken which will require major revisions to the EIR; or

(3) New information, which was not known and could not have been known at the time of the environmental impact report was certified as complete, becomes available.

In addition, state, regional, and local responsible agencies may require additional study, and impose additional conditions of approval, on future Specific Plan implementation activities under the laws and regulations applicable to those agencies independent of CEQA.

3.4.1 REQUIRED DISCRETIONARY ACTIONS, APPROVALS, AND CONSULTATIONS

a. Approvals and Permits Required from the City of Brisbane

Proposed Baylands development encompasses the following City of Brisbane approvals and permits.

City Approvals and Permits Currently Being Considered

- Amend the General Plan Land Use Element to realign the northern boundary of the Baylands Subarea to correspond to the boundary of the Baylands Specific Plan.
- Amend the General Plan Circulation Element to:
    - Realign Lagoon Road to directly access the southbound US 101 freeway ramps at Sierra Point Parkway.
    - Extend Sierra Point Parkway from its current terminus at the southbound US 101 freeway ramps north to Geneva Avenue.
    - Add proposed Baylands roadways to the General Plan circulation map.
    - Designate the Geneva Avenue extension through the Baylands as a Regional Arterial.
    - Add a new roadway type for "green local streets."
    - Remove Industrial Way as a General Plan roadway.

- Approve the Baylands Specific Plan, including a change of zone from Commercial Mixed-Use (C-1), Marsh Lagoon Bayfront (MLB), Manufacturing (M-1) to Baylands Specific Plan.
- Amend Title 17, Zoning, of the Brisbane Municipal Code to establish the land use regulations and development standards set forth in the Specific Plan as the regulatory authority governing future development within the Specific Plan area.
- Approve the Bayshore Mobility Plan.
- Approve a Development Agreement.
- Approve an agreement between the City of Brisbane and California Water Service Company (Cal Water) to provide water service for the Baylands, Sierra Point, and Beatty Subareas.

Anticipated City Approvals and Permits to Be Requested in the Future by Various Applicants

As noted in the Specific Plan, the applicant's proposed development is generally represented by Specific Plan graphics provided in the plan that illustrate residential, commercial, open space, and park site plans; building architecture; and landscaping for site-specific developments, open space and parks, and roadway rights-of-way. While approval of the Baylands Specific Plan establishes zoning and development regulations for the Baylands, site=specific development projects would require site plans, building architecture, and landscaping to be reviewed and approved by the City. This would include site-specific design plan review for non-residential development, housing development permits, conditional use permits, and minor administrative permits to be submitted to the City for prior to issuance of applicable site-specific development permits.

b. Approvals and Permits Required from Responsible and Trustee Agencies

In addition to future City approvals, Baylands development would require permits, authorizations, or other approvals from the following state, regional and local public agencies other than the City of Brisbane.

- Water service for the Baylands, Sierra Point, and Beatty Subareas.
    - Approval by the San Mateo County Local Agency Formation Commission to modify the Municipal Service Review for the City of Brisbane to identify Cal Water rather than the City of Brisbane as the water service agency for the Baylands, Beatty, and Sierra Point Subareas.

  - Approval by the California and San Francisco Public Utilities Commission for Cal Water to expand its service area to include the Baylands, Beatty, and Sierra Point Subareas within the City of Brisbane.
  - Certificate of Public Convenience and Necessity for the expansion of Cal Water's service area(s) to include the Baylands, Beatty, and Sierra Point areas that are within areas or regions under the SFPUC's jurisdiction.
  - Approval by the Regional Water Quality Control Board and the San Francisco Public Utilities Commission of a discharge permit for the Baylands Recycled Water Facility.

- Agreements to coordinate and implement roadway and other transportation improvements and services within and adjacent to the Baylands Specific Plan area between the City of Brisbane and the City and County of San Francisco, San Francisco County Transportation Authority, San Mateo Congestion Management Agency, San Mateo County Transit District, Caltrans, City of South San Francisco, and the City of Daly City.
- Approvals of requests by developers of the Baylands for habitat, recreational improvements, and/or roadway bridge improvements within:
  - The 100-foot shoreline band along Visitacion Creek and the Brisbane Lagoon (Bay Conservation and Development Commission [BCDC]); and
  - Filled and unfilled tidelands and submerged lands sold into private ownership by the State Lands Commission that remain submerged (State Lands Commission).
- Lease(s) for any habitat or recreational improvements within the Guadalupe Canal (State Lands Commission) within those portions of the Baylands subject to State Lands Commission jurisdiction.
- Approval of requests by future developers of the Baylands for infilling of existing riprap lining the Brisbane Lagoon (BCDC, Regional Water Quality Control Board [RWQCB], State Lands Commission, US Army Corps of Engineers [USACE]).
- Water quality certification, NPDES permit, and waste discharge requirement compliance for future Baylands development (RWQCB).
- Incidental Take Permit, if necessary, for Baylands development affecting special-status species (CDFW).
- Streambed Alteration Agreement (CDFW) and Section 404 permit (USACE) for activities in or around Visitacion Creek as part of landfill closure requirements of the RWQCB.
- Bay Trail Review (Association of Bay Area Governments) requested by future developers of the Baylands.

- Air quality permits (BAAQMD) requested by future developers of and specific uses within the Baylands requiring such permits.
- Approval for construction of the Geneva Avenue bridge crossing over the existing Caltrain right-of-way (California Public Utilities Commission) as requested by future developers of the Baylands.
- Approval of utility-scale battery storage facility requested by developers of the Baylands (California Independent System Operator).
- Approval for development of an electrical substation, along with electrical facilities, undergrounding of existing overhead electrical lines within the Baylands, construction of new underground electrical facilities to serve new development, connections of facilities to the existing Pacific Gas and Electric (PG&E) Martin Substation, and improvements within the Martin Substation (California Public Utilities Commission) as requested by PG&E.
- Encroachment permits for:
    - The northerly extension of Sierra Point Parkway and the Bay Trail adjacent to the existing US 101 southbound on- and off-ramps, as well as any other construction activities that need to occur within the California Department of Transportation right-of-way (Caltrans);
    - Construction of recycled water lines within the City of South San Francisco; and
    - Construction of a gen-tie electrical line within Geneva Avenue within the City of Daly City.
- Encroachment permits, should any construction be required within the right-of-way owned by the Peninsula Corridor Joint Powers Board (Caltrain).
- Required approvals for location, design, and construction of a middle school to serve Baylands students (State of California and Bayshore School District).

3.5 REFERENCES

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CHAPTER 4 ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION MEASURES

4.1 INTRODUCTION TO THE ANALYSIS

This chapter focuses upon evaluating and mitigating the significant physical environmental effects of the Baylands Specific Plan ("Specific Plan") and other project components (together, referred to as the "2025 Specific Plan project") described in Chapter 3, *Project Description*. For each environmental issue addressed in detail, this chapter describes the physical environmental setting (baseline), as well as the physical environmental changes (impacts) that would directly or indirectly result from the 2025 Specific Plan project. Finally, for each significant impact, this chapter identifies mitigation measures to avoid or reduce significant environmental effects along with an evaluation of the effectiveness of these mitigation measures and any environmental impacts that may result from their implementation.

The evaluations contained in this chapter reasonably assume that Baylands construction and development adheres to applicable federal, state, and local regulatory and permitting requirements.

4.1.1 STRUCTURE OF ENVIRONMENTAL ANALYSES

Analysis of the Baylands Specific Plan's environmental impacts are organized as follows:

4.2 Effects Found Not to Be Significant
4.3 Land Use and Planning Policies
4.4 Population and Housing
4.5 Aesthetic and Visual Resources
4.6 Biological Resources
4.7 Cultural Resources and Tribal Cultural Resources
4.8 Transportation
4.9 Air Quality
4.10 Greenhouse Gas Emissions
4.11 Energy Resources
4.12 Noise and Vibration
4.13 Hazards and Hazardous Materials
4.14 Hydrology and Water Quality
4.15 Geology, Soils, and Seismicity
4.16 Utilities, Service Systems, and Water Supply
4.17 Public Services and Facilities
4.18 Recreational Resources
4.19 Wildland Fire
4.20 Significant Unavoidable Effects
4.21 Program EIR Mitigation Measures

Sections 4.3, *Land Use and Planning Policies*, through 4.19, *Wildland Fire*, include the following main subsections:

- *Introduction*, outlining the issues addressed in the section along with definitions of technical terms used in the section.
- *Environmental Setting*, describing existing physical environmental conditions (environmental baseline) related to the environmental topic being analyzed.
- *Regulatory Context for Baylands Development*, describing federal, state, regional, and local laws, plans, programs, and regulations that provide requirements for avoiding or reducing environmental impacts and would also shape implementation of the 2025 Specific Plan project.
- *Relevant Specific Plan Provisions*, describing relevant provisions of the Baylands Specific Plan that would reduce or avoid significant environmental effects.
- *Significance Criteria*, setting forth the thresholds of significance used to determine whether the 2025 Specific Plan project's impacts would be "significant" and therefore require mitigation.
- *Project Impacts and Mitigation Measures*, setting forth and analyzing one or more impacts for each identified significance threshold. The analysis of each impact provides the following:
    - A description of the methodology used to analyze the direct and indirect physical environmental effects and determine the significance of impacts that would result from the 2025 Specific Plan project.
    - Analysis of the physical environmental effects that would directly or indirectly result from the 2025 Specific Plan project.
    - A significance conclusion comparing the physical environmental effects that would result from the 2025 Specific Plan project relative to the applicable threshold of significance. The following classifications are used to describe whether resulting impacts would be significant (and therefore require mitigation) or less than significant (and therefore not require mitigation):

CEQA Guidelines Section 15382 Significant Effect on the Environment (Significant Impact)

"'Significant effect on the environment' means a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant."

Significant impacts require implementation of feasible mitigation measures, whereas mitigation measures are not provided for less than significant impacts.

- **No Impact.** No effect on the physical environment would occur, and mitigation measures are not required.
- **Less than Significant Impact.** One or more physical environmental effects would occur that would not reach or exceed the defined significance threshold based on the specified methodology. Therefore, no mitigation is required.
- **Significant Impact.** The impact would reach or exceed the defined significance threshold based on the specified methodology and therefore require mitigation.

An initial significance conclusion is made for each threshold comparing the physical environmental effects that would result from development of the 2025 Specific Plan project with the reasonable assumption that such development complies applicable laws, plans, programs, and regulatory requirements, as well as Specific Plan requirements.

- *Relevant Program EIR Mitigation Measures*. Relevant Program EIR mitigation measures are identified and evaluated in relation to their ability to:
  - Avoid the significant impact;
  - Minimize the severity of the significant impact;
  - Rectify the significant impact by repairing, rehabilitating, or restoring the affected physical environment;

Consideration and Discussion of Mitigation Measures (CEQA Guidelines Sections 15126.4, 15364, and 15091)

For each identified significant effect, CEQA Guidelines Section 15126.4(a)(1) requires the EIR to "describe feasible measures which could minimize significant adverse impacts, including where relevant, inefficient and unnecessary consumption of energy." CEQA Guidelines Section 15364 defines "feasible" as "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors."

Formulation of mitigation measures cannot be deterred; however, the specific details of a mitigation measure may be developed after project approval when it is impractical or infeasible to include those details if the lead agency (1) commits itself to the mitigation, (2) adopts specific performance standards the mitigation will achieve, and (3) identifies the type(s) of potential action(s) that can feasibly achieve the performance standard and that will be considered, analyzed, and potentially incorporated into the mitigation measure.

Mitigation measures must be "fully enforceable through permit conditions, agreements, or other legally binding instruments," including a plan, policy, or regulation (CEQA Guidelines Section 15091(d)).

Mitigation measures are not required for less than significant impacts. Mitigation measures must also be consistent with applicable constitutional requirements, including the following (CEQA Guidelines Section 15126.4(a)(4)):

A. There must be a nexus between the mitigation measure and a legitimate governmental interest; and
B. The mitigation measure must be "roughly proportional to the impacts of the project."

- Reduce or eliminate the significant impact over time through preservation and/or maintenance operations during the life of the development permitted by the Specific Plan; and/or
- Compensate for the impact by replacing or providing substitute resources or environmental conditions.[76]

- *Significance Conclusion with Implementation of Program EIR Mitigation Measures.* Discussion of whether mitigation measures carried forward from the Program EIR would avoid or reduce significant impacts to less than significant is provided. The following classifications are used to describe the significance of impacts following implementation of Program EIR mitigation measures:
  - **Less than Significant with Mitigation Incorporated.** If implementation of mitigation measures carried forward from the Program EIR would reduce the significant impact to a less than significant level, the impact is considered to be *less than significant with mitigation incorporated*.
  - **Significant.** If mitigation measures carried forward from the Program EIR would not reduce the significant impact to less than significant, the impact would remain *significant*.
- *Additional mitigation measures*. Should implementation of mitigation measures carried forward from the Program EIR not reduce the significant impact to less than significant, additional mitigation measures are proposed.

Consideration and Incorporation of Program EIR Mitigation Measures

Section 4.21 identifies all Program EIR mitigation measures along with an evaluation of each measure to determine its applicability to the 2025 Specific Plan project. Each Program EIR mitigation measure is identified as being:

- Implemented by Baylands development as described in Chapter 3, *Project Description* (e.g., the content of the Specific Plan incorporates the mitigation measure), and is therefore considered in this EIR's pre-mitigation impact conclusions;
- Applicable to the current project and to be carried forward into the environmental analyses of this Chapter; or
- Not applicable to the 2025 Specific Plan project.

Section 4.21 provides specific explanations for these determinations for each Program EIR mitigation measure.

Section 4.21 also indicates proposed revisions, if any, for each Program EIR mitigation measure carried forward into the Program EIR in underline/~~strikeout~~ text along with the reasons for such modifications.

[76] See Section 4.21 for a listing of all Program EIR mitigation measures and discussion as to whether each measure was carried forward or not carried forward from the Program EIR.

- *Significance Conclusion with Implementation of Program EIR Mitigation Measures.* Such conclusions are based on analysis of the effectiveness of identified Program EIR and additional mitigation measure(s) to avoid or reduce significant impacts to less than significant. The following classifications are used to describe the significance of impacts following implementation of all prescribed mitigation measures:
  - **Less than Significant with Mitigation Incorporated –** If implementation of Program EIR and additional mitigation measures would reduce the significant impact to less than significant, the impact is considered to be *less than significant with mitigation incorporated*.
  - **Significant and Unavoidable Impact –** If mitigation measures would not reduce the impact to a less than significant level, the impact is considered to be *significant and unavoidable*.

  The final determination regarding the adoption of mitigation measures and alternatives is made by the Lead Agency's decision-makers.
- *Analysis of environmental impacts that would result from mitigation measures.* Where relevant, analysis of the significance of any physical environmental effects of mitigation measures is provided.

- *References*, listing the background information used to prepare the analysis in the section.

This Draft EIR identifies thresholds of significance, impacts, and mitigation measures with an alpha-numeric designation that corresponds to the environmental topic addressed in each section (e.g., "TRA" for Transportation). The numbering of thresholds, impacts, and mitigation measures is as follows:

- Significance thresholds are provided with numbers related to the section in which they are found. For example, significance thresholds in Section 4.8, *Transportation*, are numbered **Threshold TRA-1** through **Threshold TRA-4**.
- Impacts are numbered based on the environmental threshold they address. For example, **Impact TRA-1** provides analysis in relation to **Threshold TRA-1**.
- Mitigation measures are numbered based on the impact number they address. For example, **Mitigation Measure MM TRA-1** addresses **Impact TRA-1**. Where more than one mitigation measure is proposed for an impact, each mitigation measure is numbered to correspond to the impact and threshold that it addresses. For example, **Mitigation Measure MM TRA-2a** and **Mitigation Measure TRA-2b**, both address traffic **Impact TRA-2**, which analyzes significant in relation to **Threshold TRA-2**.

4.1.2 ENVIRONMENTAL BASELINES USED IN THIS EIR

"Environmental setting" subsections in this chapter describe existing conditions pursuant to California Environmental Quality Act (CEQA) Guidelines Section 15125, which states follows:

(a) An EIR must include a description of the physical environmental conditions in the vicinity of the project. This environmental setting will normally constitute the baseline physical conditions by which a lead agency determines whether an impact is significant. The description of the environmental setting shall be no longer than is necessary to provide an understanding of the significant effects of the proposed project and its alternatives. The purpose of this requirement is to give the public and decision makers the most accurate and understandable picture practically possible of the project's likely near-term and long-term impacts.

(1) Generally, the lead agency should describe physical environmental conditions as they exist at the time the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced, from both a local and regional perspective. Where existing conditions change or fluctuate over time, and where necessary to provide the most accurate picture practically possible of the project's impacts, a lead agency may define existing conditions by referencing historic conditions, or conditions expected when the project becomes operational, or both, that are supported with substantial evidence. In addition, a lead agency may also use baselines consisting of both existing conditions and projected future conditions that are supported by reliable projections based on substantial evidence in the record.

(2) A lead agency may use projected future conditions (beyond the date of project operations) baseline as the sole baseline for analysis only if it demonstrates with substantial evidence that use of existing conditions would be either misleading or without informative value to decision-makers and the public. Use of projected future conditions as the only baseline must be supported by reliable projections based on substantial evidence in the record.

(3) An existing conditions baseline shall not include hypothetical conditions, such as those that might be allowed, but have never actually occurred, under existing permits or plans, as the baseline.

CEQA Guidelines and case law recognize that the date for establishing an environmental baseline cannot be rigid (see CEQA Guidelines Sections 15146, 15151, and 15204). The Notice of Preparation (NOP) for this Draft EIR was published on February 20, 2020, and a revised NOP was circulated on April 26, 2023. In some instances, information is presented in the environmental setting that differs from the precise time of the recirculated NOP. Environmental conditions may vary from year to year, and in some cases, it is necessary to consider conditions over a range of time. Descriptions of the environmental setting for each environmental issue area can be found in Sections 4.3, *Land Use and Planning Policies*, through 4.19, *Wildland Fire*.

4.2 EFFECTS FOUND NOT TO BE SIGNIFICANT AND DISMISSED FROM FURTHER REVIEW

Pursuant to CEQA Guidelines Section 15128,[77] the following describes the analysis undertaken to conclude that certain physical environmental effects of Baylands Specific Plan development would not be significant and would therefore not require additional detailed environmental analysis in the EIR.

4.2.1 AGRICULTURAL AND FORESTRY RESOURCES

CEQA Guidelines Appendix G Questions:

Would the project:

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)[78]), timberland (as defined by Public Resources Code Section 4526[79]), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g)[80])?

The Baylands does not contain any Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, nor does such land exist within the City of Brisbane. In addition, no forestry resources occur on or in the vicinity of the Baylands or within the City of Brisbane.

[77] CEQA Guidelines Section 15128 states that an EIR "shall contain a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant and were therefore not discussed in detail in the EIR."

[78] California Public Resources Code Section 12220(g) defines forest as "land that can support 10 percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits."

[79] Public Resources Code Section 4526 defines Timberland as "land, other than land owned by the federal government and land designated by the board as experimental forest land, which is available for, and capable of, growing a crop of trees of a commercial species used to produce lumber and other forest products, including Christmas trees. Commercial species shall be determined by the board on a district basis."

[80] Government Code Section 51104 provides a process to facilitate establishment of timberland preserve zones pursuant to the Z'berg-Warren-Keene-Collier Forest Taxation Reform Act of 1976, which requires counties and cities to provide for the zoning of land used for growing and harvesting timber. Timberland preserve zones establish a 10-year restriction on the use of land for growing and harvesting timber, as well as compatible uses approved by the county (or city). In return, taxation of land within a timberland preserve zones is based only on the land's value for such use.

The Baylands and adjacent lands are designated as "Urban and Built-up Land" according to the California Department of Conservation, California Important Farmland Finder mapping system (2016). Urban and Built-up Land is characterized as being occupied by structures with a building density of at least one unit to 1.5 acres, or approximately six structures to a 10-acre parcel. Common examples include residential, industrial, commercial, institutional facilities, cemeteries, airports, golf courses, sanitary landfills, sewage treatment facilities, and water control structures.

The Baylands site is not designated or zoned for agricultural or forestry use by the City of Brisbane, nor is the site subject to a Williamson Act contract. There are no lands within or adjacent to the Baylands that would meet the definition of timberland or could qualify for establishment of a timberland preserve. Thus, the Specific Plan would have no impact on agricultural or forestry resources, and no impacts related to agricultural or forestry resources.

4.2.2 MINERAL RESOURCES

CEQA Guidelines Appendix G Questions:

Would the project:

a) Result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the state?

b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

Neither the City's General Plan nor the State of California have identified the Brisbane Baylands or any surrounding land as a potential location for extraction or management of mineral resources of state-wide, regional, or local significance. Therefore, no impacts on mineral resources would result from the Baylands Specific Plan.

4.3 LAND USE AND PLANNING POLICIES

4.3.1 INTRODUCTION

a. Overview

This section describes land use characteristics of the Baylands and surrounding lands and examines whether the 2025 Specific Plan project would cause a significant environmental impact by:

- Eliminating or reducing existing levels of connectivity within Brisbane or other communities; or
- Conflicting with a relevant land use plan, policy, or regulation that has been adopted for the purpose of avoiding or mitigating an environmental effect, including the Brisbane General Plan, Plan Bay Area 2050, MTC Transit-Oriented Communities Policy (Resolution No. 4530), the San Francisco Bay Plan, or the Airport Land Use Compatibility Plan for the Environs of San Francisco International Airport (see CEQA Guidelines Section 15125(d)).

b. Definitions

Airport Influence Area encompasses the area that is flown by an aircraft to or from an airport at an altitude of 10,000 feet or less above mean sea level a minimum of once weekly. Unless otherwise specified, "Airport Influence Area" refers to the Airport Influence Area of San Francisco International Airport (SFO).

Density/Intensity of use refers to the relative concentration of development. Typically, "density" refers to residential development and is expressed as the number of dwelling units per acre of land, while "intensity" refers to non-residential or mixed-use development and is expressed as the ratio of building area to land area and called floor area ratio (FAR).

Existing Land Use consists of the use of land at the time of the baseline used in this Draft EIR for analysis of land use and policies, which corresponds to the public review period for the revised Notice of Preparation, spring 2023.

General Plan refers to the comprehensive, long-term plan for the physical development of a city or county adopted pursuant to the requirements of California Government Code Sections 65300–65303.4. Unless otherwise specified, "General Plan" refers to the officially adopted General Plan of the City of Brisbane as amended.

Permitted Land Uses refer to the specific uses consistent with the applicable General Plan and zoning (or Specific Plan) designations. Unless otherwise specified, "permitted land uses" refers to the land uses permitted or conditionally permitted by the Baylands Specific Plan.

Planned Land Use refers to the uses described in General Plan land use designations. Unless otherwise specified "planned land uses" refers to the City of Brisbane's General Plan land use designations as amended.

Site-Specific Development Project refers to future development proposals for individual portions of the Baylands.

Transit Priority Area is defined in California Public Resource Code Section 21099 as an area within one-half mile of an existing major transit stop of a planned major transit stop that is scheduled to be completed within the planning horizon included in a Transportation Improvement Program or applicable regional transportation plan.

Land Use Compatibility

"Land use compatibility" refers to the characteristics of different uses or activities that permit them to be located near each other without conflict. Because it is not a distinct CEQA significance threshold, the extent to which Baylands development would or would not be "compatible" with adjacent land uses is addressed in relation to the following specific physical environmental effects:

- **Aesthetics and Visual Resources** – impacts on scenic vistas, nighttime lighting, and daytime glare.
- **Air Quality** – health effects on sensitive uses (e.g., residential) due to emissions of criteria pollutants and toxic air contaminants.
- **Hazards and Hazardous Materials** – construction and post-construction activities that could result in hazards to the public.
- **Hydrology and Water Quality** – flooding, drainage, and water quality conditions.
- **Land Use** – loss of connectivity between established communities.
- **Noise and Vibration** – temporary or permanent increases in ambient noise and vibration levels.
- **Transportation** – impacts related to circulation and access, including the potential for hindering normal or emergency access.

Zoning refers to the written regulations and laws that implement the City's General Plan and define how property in specific geographic zones can be used pursuant to the planning and zoning law of the State of California, as contained in Government Code Title 7, Division 1, Chapter 4 (commencing with Section 65800). Zoning specifies the permitted uses within zones and regulates lot size and placement, bulk, and height of structures. Unless otherwise specified, "zoning" refers to regulations set forth in Title 17 of the Brisbane Municipal Code as amended.

4.3.2 PHYSICAL ENVIRONMENTAL SETTING

a. Baseline

Release of the second Notice of Preparation during Spring 2023 is used as the baseline to describe existing conditions and for analysis of the Specific Plan's impacts in relation to Land Use and Planning Policies.

b. Existing Land Uses within the Baylands

Natural features within the Baylands include Brisbane Lagoon, Visitacion Creek, and Icehouse Hill. The existing 121.8-acre lagoon includes water area and lagoon wetland area. Visitacion Creek bisects the eastern half of the Baylands as an open channel and includes the waterway and bank between US Highway 101 and Tunnel Avenue. To the west of the rail corridor is Icehouse Hill, most of which consists of undisturbed natural area.

While the Baylands is surrounded on three sides by residential, commercial, and industrial development within Brisbane, San Francisco, and Daly City, the site itself is largely characterized by disturbed open lands that were formerly part of the Brisbane Landfill (east of the rail corridor) and the former SPRR maintenance yard (west of the rail corridor), with remnant railroad buildings, such as the Roundhouse and the Machinery & Equipment building. The historic significance of these railyard remnants is described in detail in Draft EIR Section 4.7, *Cultural and Tribal Cultural Resources*.

The Brisbane Bayshore Industrial Park, which contains warehousing and supply-related service uses that occupy the area east of Bayshore Boulevard along Industrial Way. Mission Blue Nursery, a native plant nursery operated by the Friends of San Bruno Mountain, is also present within the western portion of the Baylands.

Since the landfill's closure in 1967, the eastern portion of the Baylands has been used as a repository and recycling area for materials from construction sites in the region, such as sand, dirt, and gravel. Soil recycling operations have ceased operation; Brisbane Recycling Company continues to operate on the former landfill. Several interim uses operate along Tunnel Avenue south of Golden State Lumber.

The City's existing corporation yard is located along Tunnel Avenue south of the Kinder Morgan tank farm on land leased from Kinder Morgan.

The Bayshore Caltrain station platform is located in the northernmost portion of the Baylands, including a parking lot west of Tunnel Avenue.

Existing Land Uses Anticipated to Remain within the Baylands

The Specific Plan area encompasses certain existing uses that are not expected to change their use or expand over time. These uses, which the Specific Plan designates as "Existing Use Area," include:

- Satellite facilities associated with the Recology solid waste transfer facility located along Tunnel Avenue south of the future Geneva Avenue extension;
- Golden State Lumber, which is a 5.3-acre lumberyard located along Tunnel Avenue;

- The 23.5-acre Kinder Morgan Energy Bulk Terminal (tank farm) is located near the center of the Baylands between the Caltrain line and Tunnel Avenue. This fuel storage facility supplies jet fuel for aircraft at San Francisco International Airport, located south of Brisbane;
- A Bayshore Sanitary District pumping facility; and
- Machinery & Equipment, Inc., which buys and sells used industrial machinery, is located in the historic Pacific Fruit Express/Visitacion ice manufacturing plant (commonly referred to as the Machinery & Equipment building).

The existing Mission Blue Nursery is proposed to be relocated from its current location west of the Caltrain rail line to the site of the existing police shooting range on Icehouse Hill.

Following its relocation, the existing Fire Station #81 will be used for firefighter training purposes.

Uses Adjacent to the Baylands Specific Plan

Adjacent to the northeastern portion of the Baylands is the 44.2-acre Recology San Francisco solid waste management facility, which is located partly within both Brisbane and San Francisco.

Outside of the Baylands are a variety of residential, commercial, and industrial uses. To the north within San Francisco is the former Schlage Lock factory, which is currently undergoing site remediation for development of 1,679 dwelling units and up to 46,000 square feet of commercial use as part of a project called "Baylands North." The Bayview/Hunters Point Redevelopment Project, which has been approved for development of 10,250 dwelling units and 6.4 million square feet of commercial use, is also located within San Francisco northeast of the Baylands across US Highway 101.

Along Bayshore Boulevard, uses to the northwest of the Baylands include San Francisco's Visitacion Valley residential neighborhood, and to the west, land uses include residential, commercial, and manufacturing uses within Daly City, and the PG&E Martin substation. Also located within Daly City, approximately five blocks west of the Baylands along Geneva Avenue is the Cow Palace, an indoor arena used for public events such as concerts, sporting events, and conventions. The Northeast Ridge residential area in Brisbane is south of the PG&E substation, and the 250-acre Crocker Industrial Park is nestled between the Northeast Ridge area and Central Brisbane. Central Brisbane is located at the southwest edge of the Baylands, west of Brisbane Lagoon. Land uses in Central Brisbane are primarily residential, with retail located along Old Country Road and Visitacion Avenue.

Southeast of the Baylands and east of US Highway 101 is the Sierra Point Business Center, which currently encompasses a number of life science and office buildings, two hotels (Doubletree Hotel and Homewood Suites), and the Brisbane Marina. Few undeveloped

properties remain within the Sierra Point subarea with recent approvals and construction of a biotech campus (The Shore at Sierra Point) consisting of 540,000 square feet in five buildings and an above-ground parking structure on approximately 23 acres along the south edge of Sierra Point and a three-building 560,000 square foot biotech campus (Genesis-Marina) on approximately 9 acres at the northwestern corner of Sierra Point.

In addition to the existing buildings and projects currently under construction are two proposed projects—Sierra Point Towers Project and the Sierra Point Hotel and Life Science Project. The Sierra Point Towers Project consists of two new life science buildings totaling approximately 811,000 square feet, an amenity building, and a new parking structure on a 16-acre site in the middle of the subarea that is currently developed with two existing office buildings that will remain. The Sierra Point Hotel and Life Science Project consists of a 600-room hotel and 657,000 square foot life science tower on a 6-acre site adjacent to the Brisbane Marina.

4.3.3 REGULATORY CONTEXT FOR BAYLANDS DEVELOPMENT

a. Federal Laws, Plans, Programs, and Regulations

There are no federal laws, plans, programs, or regulations addressing land use planning policy issues that would affect Baylands development.

b. State Laws, Plans, Programs, and Regulations

General Plan Requirements

State law (Government Code 65302, et seq.) requires that every California city and county prepare and adopt a "comprehensive, long-term general plan for the physical development of the county or city, and of any land outside its boundaries which in the planning agency's judgment bears relation to its planning." According to State guidelines for the preparation of general plans, the role of the General Plan is to establish a document that will "… act as a 'constitution' for development, the foundation upon which all land use decisions are to be based. It expresses community development goals and embodies public policy relative to the distribution of future land use, both public and private."

In addition, the General Plan serves to:

- Identify land use, circulation, environmental, economic, and social goals and policies for the City and its surrounding planning area as they relate to land use and development;
- Provide a framework within which the City's Planning Commission and City Council can make land use decisions;

- Provide citizens the opportunity to participate in the planning and decision-making process affecting the City and its surrounding planning area; and
- Inform citizens, developers, decision-makers, and other agencies, as appropriate, of the City's basic rules that will guide both environmental protection and land development decisions within the City and surrounding planning area.

Government Code Section 65860 requires that a city's zoning ordinance be consistent with its General Plan, thus requiring that the various land use permitted by a community's zoning be "compatible with the objectives, policies, general land uses, and program specified in the plan."

Specific Plan Requirements

Government Code Section 65451 sets forth the following requirements for specific plans:

(a) A specific plan shall include a text and a diagram or diagrams, which specify all of the following in detail:

  (1) The distribution, location, and extent of the uses of land, including open space, within the area covered by the plan.

  (2) The proposed distribution, location, and extent and intensity of major components of public and private transportation, sewage, water, drainage, solid waste disposal, energy, and other essential facilities proposed to be located within the area covered by the plan and needed to support the land uses described in the plan.

  (3) Standards and criteria by which development will proceed, and standards for the conservation, development, and utilization of natural resources, where applicable.

  (4) A program of implementation measures, including regulations, programs, public works projects, and financing measures necessary to carry out paragraphs (1), (2), and (3).

(b) The specific plan shall include a statement of the relationship of the specific plan to the general plan.

Per Government Code Section 65452, a specific plan "may address any other subjects which in the judgment of the planning agency are necessary or desirable for implementation of the general plan." Government Code Section 65454 requires specific plans to be consistent with the agency's adopted General Plan.

c. Regional Plans, Programs, and Regulations

Plan Bay Area 2050

Plan Bay Area 2050 is the current long-range Regional Transportation Plan (RTP) and Sustainable Communities Strategy (SCS) for the nine-county San Francisco Bay Area jointly prepared and adopted by the Association of Bay Area Governments (ABAG) and the Metropolitan Transportation Commission (MTC).[81] Plan Bay Area 2050 discusses how the Bay Area will grow through 2050 and describes the growth pattern, transportation needs and supporting transportation investment strategy, and other key actions needed to address GHG emission reduction, provide needed housing, preserve the character of communities throughout the region, facilitate mobility, and adapt to the challenges of future population growth. The Sustainable Communities Strategy lays out how the region will meet GHG reduction targets set by CARB, which call for a regional 10 percent per-capita vehicular GHG emissions reduction by 2020 and 19 percent by 2035 from a 2005 baseline (CARB 2018).

A central GHG emissions reduction strategy of Plan Bay Area 2050 is to concentrate future growth in Priority Development Areas and Transit Priority Areas. To be eligible for designation as a Priority Development Area, an area must be within an existing community, near existing or planned fixed transit or served by comparable bus service and planned for more housing. A Transit Priority Area is an area within one-half mile of an existing or planned major transit stop such as a rail transit station, a ferry terminal served by transit, or the intersection of two or more major bus routes (MTC and ABAG 2013). The Specific Plan area is located in both a Priority Development Area and a Transit Priority Area.

Plan Bay Area 2050 can be found at:

https://mtc.ca.gov/planning/long-range-planning/plan-bay-area-2050

Plan Bay Area 2050 presents a 30-year plan comprised of 35 strategies to improve housing, the economy, transportation, and the environment across the Bay Area's nine counties: Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma. This long-range plan lays out a $1.4 trillion vision for a more equitable and resilient future for Bay Area residents. Overall, Plan Bay Area 2050:

- Details housing and economic strategies ("land use") to invest $702 billion in expected revenues to accommodate 2.7 million new persons, 1.4 million new households, 1.5 new forecasted housing units, and 1.4 million new jobs between 2015 and 2050;

[81] ABAG and MTC are empowered by state law to assess regional housing needs and provide a specific allocation of housing needs for all economic segments of the community for each of the region's counties and cities. The determination of each city's and county's share of regional housing needs that is required by law to be reflected in municipal general plan housing elements is based on the growth projections of the RTP/SCS.

- Details transportation strategies to invest $579 billion in expected revenues from federal, State, regional, and local sources over the next 30 years;
- Details environmental strategies to invest $102 billion in expected revenues to protect the region from at least 2 feet of future permanent sea level rise inundation, reduce climate emissions, and maintain and expand the region's parks and open space system; and
- Complies with Senate Bill (SB) 375, the State's SCS law, which requires integration of land use and transportation planning to reduce per-capita passenger vehicle GHG emissions by 2035 and provide adequate housing for the region's forecast of 2.7 million new persons and 1.4 million new households.

Plan Bay Area 2050 Objectives, Guiding Principles, and Themes

Plan Bay Area 2050's adopted vision is to "ensure by the year 2050 that the Bay Area is affordable, connected, diverse, healthy, and vibrant for all." After this vision was adopted, the MTC and ABAG planning team developed 35 strategies along with five guiding principles or themes. Together, Plan Bay Area 2050's guiding principles and performance metrics serve as the basis for the following objectives:

1. Address climate change by reducing carbon dioxide emissions; specifically, meet or exceed a 19 percent reduction in per-capita emissions from cars and light-duty trucks by 2035 relative to 2005 levels.
2. House 100 percent of the region's projected growth by income level, and without increased in-commuters to the Bay Area over the baseline conditions.
3. Ensure that all current and future Bay Area residents and workers have sufficient housing options they can afford by reducing housing and transportation costs and by producing and preserving more affordable housing.
4. Support an expanded, well-functioning, safe, and reliable multimodal transportation system by improving access to destinations.
5. Support an inclusive region where people from all backgrounds, abilities, and ages can remain in place with full access to the region's assets and resources by creating more inclusive communities and reducing the risk that Bay Area residents are displaced.
6. Conserve the region's natural resources, open space, clean water, and clean air with the intent of improving health of Bay Area residents and workers and improving the health of the environment locally and globally.
7. Support the creation of quality job opportunities for all and ample fiscal resources for communities by more evenly distributing jobs and housing in the Bay Area.

CROSS-CUTTING THEMES	RESILIENCE AND EQUITY
Vision	To ensure by the year 2050 that the Bay Area is affordable, connected, diverse, healthy and vibrant for all.
GUIDING PRINCIPLE	DESCRIPTION
AFFORDABLE	All Bay Area residents and workers have sufficient access to housing options they can afford — households are economically secure.
CONNECTED	An expanded, well-functioning, safe and multimodal transportation system connects the Bay Area — fast, frequent and efficient intercity trips are complemented by a suite of local transportation options, connecting communities and creating a cohesive region.
DIVERSE	The Bay Area is an inclusive region where people from all backgrounds, abilities, and ages can remain in place with access to the region's assets and resources.
HEALTHY	The region's natural resources, open space, clean water and clean air are conserved — the region actively reduces its environmental footprint and protects residents from environmental impacts.
VIBRANT	The Bay Area region is an innovation leader, creating job opportunities for all and ample fiscal resources for communities.

SOURCE: Adopted by MTC and ABAG in September 2019.

Plan Bay Area 2050 is defined by four elements: housing, economy, transportation, and environment. Within each, there are 11 central themes under which the 35 strategies described below are nested. Equity and resilience—the cross-cutting themes of Plan Bay Area 2050—are integrated into each element, theme, and strategy.

Housing

Plan Bay Area 2050's housing strategies provide for accommodating 1.5 million new housing units over the next 30 years. These strategies reflect a commitment to "focused growth" while also protecting current residents from displacement, preserving existing affordable housing, and producing new housing to secure long-term affordability within the Bay Area.

- **Protect and Preserve Affordable Housing.** Plan Bay Area 2050 recognizes that the depth of the Bay Area's housing crisis is so great that it is unlikely that increased housing construction alone could ensure every Bay Area resident has access to a safe and affordable home. Protecting and preserving existing affordable housing is thus critical.

Strategies build upon existing legislation to protect renters from discriminatory actions or untenable rent increases to limit displacement. Strategies also include an investment to ensure that today's affordable housing remains affordable.

- **Spur Housing Production at all Income Levels.** The Bay Area has historically fallen short of producing housing for all income levels, particularly low- and moderate-income households. Plan Bay Area 2050 notes that spurring housing production at all income levels "will likely require a mix of land use reforms, new requirements for housing developers, and financial incentives to… produce housing affordable to low- and moderate-Income families." Plan Bay Area 2050 proposes achieving sufficient housing to accommodate projected population growth through a greater mix of housing densities and types within priority development and transit areas, increased funding for construction of deed-restricted affordable housing, and requirements for 10–20 percent of new market-rate housing developments with five or more units to be affordable to low-income households.
- **Create Inclusive Communities.** Strategies that increase access to wealth-building opportunities, such as home ownership or owning a personal business, as well as leveraging public and community-owned land for housing and service provision, are proposed with the intent of improving conditions for "Black, indigenous, and Latinx people who have been historically excluded from such opportunities."

Economy

Plan Bay Area 2050's economic strategies provide for accommodating a forecasted 1.4 million new jobs over the next 30 years by concentrating development of new employment centers within the existing urban development footprint and close to housing and transit stations.

- **Improve Economic Mobility.** Plan Bay Area 2050 addresses the types of jobs available to Bay Area residents that have made the traditional path to the middle class through blue-collar manufacturing labor more elusive due to a cycle of higher-wage high tech job growth and rising housing costs increases the Bay Area's cost of living. Plan Bay Area 2050 recognizes that a stronger safety net, coupled with pathways to middle-wage jobs, is "critical to ensuring that no one is priced out of the Bay Area."
- **Shift the Location of Jobs.** Plan Bay Area 2050 addresses the Bay Area's "decades in the making" imbalance between the location of jobs and housing, a transportation system designed to meet peak hour demand, and the power of high-tech jobs being clustered in the Peninsula and South Bay.

Transportation

Plan Bay Area 2050 transportation strategies provide for carrying millions more passengers on the area's trains, ferries, buses, and roads, while also increasing telecommuting. The plan

identifies funding to operate and maintain the Bay Area's existing system of transit routes, roads and bridges; reverse pandemic-related cuts to transit service; and create a seamless transit experience. In addition, roads would be made safer for drivers, cyclists, and pedestrians through speed limit reductions and a network of protected bike lanes and trails designed for people of all ages and physical abilities. Finally, Plan Bay Area 2050 proposes investments in transit to deliver fast, frequent, and reliable service throughout the region.

- **Maintain and Optimize the Existing System.** Plan Bay Area 2050 envisions a future transit system that is maintained in good working order with transit service hours restored to pre-COVID levels and transit fares are simplified. Road-widening projects are proposed to provide short- to medium-term congestion relief before a new per-mile fee is applied on select highways with transit alternatives to help relieve congestion and significantly reduce GHG emissions.
- **Create Healthy and Safe Streets.** A well-connected "Complete Streets" network with 10,000 new miles of protected bike lanes and off-street paths is proposed, including investments in regional multi-use trails for commuting or recreation and completion of the San Francisco Bay Trail. In addition to on-street infrastructure, investments would provide bicycle parking at transit stations, pedestrian lighting, and intersection safety improvement projects to support non-motorized mobility as a safe and comfortable choice for people of all ages and abilities.
- **Build a Next-Generation Transit Network.** Plan Bay Area 2050 proposes to enhance the frequency, reliability, and capacity of existing local transit systems, including investment in bus and light rail systems. Plan Bay Area 2050 proposes new local transit lines, including heavy rail (e.g., BART, Caltrain), light rail, and bus rapid transit. A limited selection of freeway widening projects are proposed to make better use of the existing network. Plan Bay Area 2050 includes an integrated regional network of 600 miles of express lanes for express bus service and carpool trips. Plan Bay Area 2050 also links planning for freeway express lanes with strategies to implement per-mile tolling on select freeways with transit alternatives.

Priority Development Areas

Priority Development Areas serve as the basis for reducing greenhouse gas emissions and beginning to solve the region's housing crisis. Their purpose is to bring transit, jobs, and housing together in downtown areas, along major streets, and in proximity to rail stations. Because Priority Development Areas are in locations with existing transit infrastructure, they are intended to maximize use of public investments, limit impacts of new development on communities and the environment and enable people to live a car-free or car-light lifestyle. The Specific Plan area is located within a bi-county Priority Development Area along with adjacent lands in San Francisco.

Connected Community Priority Development Area VMT Reduction Policy

Priority development areas are required to adopt either citywide or area-specific VMT reduction policies/plans using either both Options A1 and A2 or both Options B1 and B2, below.

A1. Parking and Transportation Demand Ordinance

The Parking and Transportation Demand Management ordinance, code update, or related policy must provide a framework for assessing VMT impacts and planning VMT mitigation strategies as part of the review and permitting process for both new residential and commercial developments either citywide or for a specific PDA. The framework should support and align with the community's General Plan and any applicable Specific Plan and be compliant with SB 743.

Important elements must include but are not limited to:

- Defining applicability for each policy;
- Performance requirements, such as a percent reduction in single occupancy vehicle trips to a development or a target average vehicle occupancy for employee trips to an employer site;
- Process for ensuring compliance, including options that provide flexibility and offer effective parking solutions (such as reduced parking requirements, parking pricing, and parking management) and trip reduction approaches (such as vehicle trip caps, multimodal infrastructure requirements, bicycle parking, carsharing, and transit passes); and
- Process for monitoring and enforcement, including penalties for non-compliance.

A2. Transportation Impact Fee

A Transportation Impact Fee to provide a mechanism for funding multimodal infrastructure and other transportation improvements, such as corridor-level and active transportation projects (e.g., transit improvements, bicycle and pedestrian infrastructure) in addition to intersection-level improvements. Important elements of a Transportation Impact Fee include, but are not limited to:

- Assessment and description of transportation investment needs, which should be aligned with SB 743 mitigation measures;
- Estimated costs of providing the transportation improvements and list of projects eligible for impact fee funding;
- Analysis of different development types and associated fees for nexus study;
- Recommended transportation mitigation impact fees and description of how the fees will be used; and

- Plan for publicly publishing the study and annual fee reports and updating impact fees.

B1. Vision Zero/Local Road Safety Plan

A Vision Zero Plan or Local Road Safety Plan focused on improving pedestrian and bicycle safety provides a framework for identifying, analyzing, and prioritizing local roadway safety improvements tailored to local needs. It should facilitate a proactive approach to identifying safety improvement projects by completing a system-wide, data-driven analysis of collisions. A Local Road Safety Plan will be required to be eligible for future Highway Safety Improvement Program funding. Important elements of a Vision Zero/Local Road Safety Plan include but are not limited to:

- Collision database development and proactive analysis of local collision data;
- Identification of high-risk locations and collision patterns;
- Identification and prioritization of system-wide; prioritization should identify "Quick-Build" or other types of rapid implementation projects that can be accomplished, along with longer-term countermeasures; and
- Development of metrics to help secure funding and address key safety issues.

The Vision Zero and Safety Plan activities will inform the Bicycle and Pedestrian Infrastructure Action Plan (B2).

B2. Bicycle and Pedestrian Infrastructure Action Plan

A Bicycle and Pedestrian Infrastructure Action Plan consisting of a set of near-term improvements aligned with a jurisdiction's longer-term plans (e.g., Bicycle, Pedestrian, Active Transportation, Vision Zero Safety, Transportation, First/Last Mile, Corridor, PDA, or Specific Plan). The Action Plan should focus on near-term (primarily 1-3 year timeframe, and within a 5-year maximum) or quick-build infrastructure improvements for people biking, walking, or scooting. It should identify the timeline actions to bring high-priority projects to construction or implementation. For two-wheeled improvements, the action plan should prioritize Class 2 or better bikeways. In addition to stand-alone actions, Plans are encouraged to include actions that incorporate bicycle/pedestrian safety into other local processes, such as pedestrian signal timing adjustments, integration of striping that increases bike/ped safety into paving contracts, establishment of new high-visibility crosswalk standards, inter-agency coordination around school safety, etc.

Environment

Plan Bay Area 2050 prioritizes the preservation and improvement of land, air, and water in the Bay Area through strategies to conserve and better use current resources, mitigate the effects of

climate change, adapt to hazardous climate events, and minimize the impacts of disastrous seismic events.

- **Expand Access to Parks and Open Space.** Plan Bay Area 2050 proposes strategies to expand and modernize open space areas ranging from ecosystem-critical conservation to community-building gathering spaces like parks, trails, and recreation facilities. In addition, the Plan proposes using urban growth boundaries and other existing environmental protections to focus new development within the existing urban footprint or areas otherwise suitable for growth, as determined by local jurisdictions.
- **Reduce Climate Emissions from Vehicles.** The Plan seeks to mitigate emissions and reduce future climate impacts by expanding commute trip reduction programs at major employers. The plan also encourages Bay Area residents to drive less through transportation demand management initiatives.
- **Reduce Risks from Hazards.** Plan Bay Area 2050 proposes adaptation measures to address climate change and other natural hazards. Seismic and wildfire impacts include means-based financial support to retrofit residential buildings. Plan Bay Area 2050 also proposes to fund sea level rise adaptation measures along with energy upgrades to enable carbon neutrality in all commercial and public buildings are proposed.

Transit-Oriented Communities Policy (Metropolitan Transportation Commission Resolution 4530)

MTC's Transit-Oriented Communities Policy implements Plan Bay Area 2050 by creating communities around transit stations and along transit corridors that not only support transit ridership, but that are places where Bay Area residents of all abilities, income levels, and racial and ethnic backgrounds can live, work, and access services, such as education, childcare, and healthcare (MTC 2024).[82] As noted in MTC's Administrative Guidance: Transit-Oriented Communities Policy, "To ensure eligibility for OBAG 4[83] funding and any other discretionary funding that may be linked to TOC Policy compliance, jurisdictions should anticipate demonstrating compliance prior to adoption of OBAG 4, expected in 2026" (MTC 2024).

MTC's Transit-Oriented Communities Policy addresses areas within one-half mile of existing and planned fixed-guideway transit stops and stations serving regional rail, commuter rail, light-rail transit, bus rapid transit, and ferries. As presented in MTC's Administrative Guidance,

[82] For more information, visit: https://mtc.ca.gov/sites/default/files/documents/2023-03/MTC_Draft_TOC_Policy_Administrative_Guidance_Mar2023.pdf. The TOC policy provides the following definition: "Fixed guideway means a public transportation facility that uses and occupies a separate right-of-way or rail line for the exclusive use of public transportation and other high occupancy vehicles, or uses a fixed catenary system and a right of way usable by other forms of transportation. This includes, but is not limited to, rapid rail, light rail, commuter rail, automated guideway transit, people movers, ferry boat service, and fixed-guideway facilities for buses (such as bus rapid transit) and other high occupancy vehicles" (49 CFR Section 611.105).

[83] "OBAG 4" refers to the fourth round of "One Bay Area Grants."

areas within Brisbane that are within one-half mile of the Bayshore Caltrain station and T Third Muni stops must meet the requirements for a Tier 3 stop/station, except for the minimum residential density, which may use Tier 4 requirements.[84] Other SamTrans or Muni bus stops do not qualify as fixed-guideway transit with a separate right-of-way (as would be present for bus rapid transit) and therefore do not qualify for MTC's Transit-Oriented Communities designation. MTC has not included the planned Geneva Avenue bus rapid transit route identified in the 2011 San Francisco / San Mateo Bi-County Transportation Study as a transit-oriented community as of October 2024.[85]

Within Brisbane, the area within one-half mile of the Bayshore Caltrain station and T Third Muni stops is shown on **Figure 4.8-3**. However, this does not include other SamTrans or Muni bus stops, given the requirement for a fixed-guideway transit that occupies a separate right-of-way to qualify as bus rapid transit. Given this level of transit service, Brisbane is classified as a "Tier 3" city, which include the following transportation features:

- Parking maximum of one space per unit or lower for residential buildings and 2.5 spaces per 1,000 square feet or lower for commercial buildings;[86]
- A minimum of one secure bicycle parking space per dwelling unit;
- A minimum of one secure bicycle parking space per 5,000 occupied square feet for office commercial;
- Allow unbundled parking;
- Allow shared parking between different land uses;
- Adopt policies and design guidelines to comply with MTC's Complete Streets Policy;
- Complete access gap analysis for station access within a 10-minute walk;
- Identify opportunities to implement mobility hubs at locations identified by MTC.[87]

[84] As shown in Table 1, Tier 3 TOC areas in jurisdictions with 30,000 residents or fewer may use Tier 4 standards for residential density. All other requirements must meet Tier 3 standards.

[85] As presented in MTC's map of TOC communities and list of station areas and jurisdictions on MTC's TOC website, accessed here by Fehr & Peers on October 18, 2024: https://mtc.ca.gov/planning/land-use/transit-oriented-communities-toc-policy.

[86] The MTC TOC policy notes that the "standards may apply to individual projects or may be met through creation of a parking district that provides shared vehicle parking for multiple land uses within an area."

[87] Potential mobility hub locations adjacent to the project site include the Bayshore Caltrain station and other sites along Bayshore Boulevard north of Geneva Avenue: https://mtc.maps.arcgis.com/apps/webappviewer/index.html?id=2885234dd1b447a6907aba83b343a0de.

Transit-Oriented Communities Policy standards[88] applicable to the Baylands include:

- Average residential density for new development within one-half mile of a Caltrain stop.
    - Residential density of 25-35 dwellings per acre or higher measured on a block-by-block basis (applicable to communities such as Brisbane with a population less than 30,000). Average commercial development intensity for new development within one-half mile of a Caltrain stop as measured on a block-by-block basis.
    - Floor area ratio of 2.0 to 4.0 as measured on a block-by-block basis.
- Affordable housing production.
    - 15 percent of units in new residential development projects to be deed-restricted affordable to low-income households.[89]
- Ministerial Approval
    - Grant ministerial approval of residential developments with 15 percent affordable units for projects with 11+units or that exceed inclusionary or density bonus affordability requirements and do not exceed 0.5 parking spaces per unit.
- Stabilizing businesses to prevent displacement.
    - Give priority and a right of first offer to local small businesses and/or community-serving non-profits when selecting tenants for new market-rate commercial space.
- Parking management.
    - Residential Development: No minimum parking requirement to be applied with no more than 1.0 space per unit to be permitted as measured on a district-by-district basis.
    - Commercial Development: No minimum parking requirement to be applied with no more than 2.5 spaces per 1,000 square feet to be permitted as measured on a district-by-district basis.
- Transit Station Access.
    - Adopt policies and design guidelines that comply with MTC's Complete Streets Policy (MTC Resolution No. 4493).

[88] Transit-Oriented Communities Policy development standards can be found at https://mtc.ca.gov/sites/default/files/documents/2022-10/MTC_Resolution_4530.pdf.

[89] A lower percentage may be applied if a satisfactory financial feasibility analysis demonstrates the 15 percent affordability standard is not feasible.

  - Provide improvements to allow station access via a 10-mintue walk (including for people who use wheelchairs or other mobility aids) and 15-minute bicycle or bus/shuttle trip for uses within one-half mile of the transit station.

- Bicycle Parking.

  All new residential or general and neighborhood-serving commercial development to provide

  - Minimum of one secure bicycle parking space per dwelling unit
  - Minimum of one secure bicycle parking space per 5,000 occupied square feet of office space.

Complete Streets Policy (Metropolitan Transportation Commission Resolution 4493)

The goal of MTC's Complete Streets Policy is to ensure people biking, walking, rolling, and taking transit are safely accommodated within the transportation network. This policy implements Plan Bay Area 2050 strategies, including mode shift, safety, equity, VMT, and greenhouse gas emission reductions, and support local compliance with applicable complete streets-related laws, policies, and standards. This is primarily accomplished by requiring a Complete Streets checklist from projects seeking discretionary funding or funding endorsements from MTC.

Complete Streets

Complete streets are roadway facilities that are planned, designed, operated, and maintained to provide safe mobility for users of all ages and physical abilities, including bicyclists, pedestrians, transit users, and motorists and truckers, appropriate to the function and context of the facility.

The complete streets concept embodies four core principles:

1. Accommodate all modes of travel including:
   a. Safety and accessibility for pedestrians of all ages and physical abilities;
   b. Meeting the needs of bicyclists by providing dedicated bicycle infrastructure;
   c. Integrating public transit into the transportation network; and
   d. Safe and efficient vehicle movement.
2. Provide efficient multi-modal access between destinations throughout the community.
3. Enhance the public realm along streets and create multi-functional places that attract people and commerce.
4. Sustainable design that integrates green infrastructure into the roadway network.

Thus, complete streets optimize comfort and safety for all users and incorporate design best practices for safe street crossings, pedestrian and Americans with Disabilities Act (ADA) accessibility at transit stops, and bicycle/micromobility.

San Francisco Bay Plan

A portion of the Baylands is within a 100-foot shoreline band surrounding San Francisco Bay subject to the jurisdiction of the San Francisco Bay Conservation and Development Commission (BCDC). Portions of the Baylands subject to BCDC jurisdiction include areas subject to tidal action, including marshlands lying between mean high tide and 5 feet above mean sea level (land lying between mean high tide and mean low tide) along Visitacion Creek and the Brisbane Lagoon, as well as submerged lands (land lying below mean low tide).

BCDC's purpose is to protect and enhance San Francisco Bay for public and environmental benefit and to encourage responsible use. BCDC ensures that development within the shoreline band is consistent with the *San Francisco Bay Plan*, which contains policies and findings that guide appearance, design, and scenic views of future development around the Bay and encourage new shoreline development to provide public access to the Bay to the maximum extent feasible.

Objectives of the San Francisco Bay Plan

Objectives of the *San Francisco Bay Plan* are to:

- Protect the Bay as a great natural resource for the benefit of present and future generations.
- Develop the Bay and its shoreline to their highest potential with a minimum of Bay filling.

BCDC's "Major Conclusions and Policies"[90]

The major conclusions and policies of the San Francisco Bay Plan include the following:

1. **The Bay.** The Bay is a single body of water, and a Bay Plan can be effectively carried out only on a regional basis.
2. **Uses of the Bay.** The most important uses of the Bay are those providing substantial public benefits and treating the Bay as a body of water, not as real estate.
3. **Uses of the Shoreline.** All desirable, high-priority uses of the Bay and shoreline can be fully accommodated without substantial Bay filling and without loss of large natural resource areas. But shoreline areas suitable for priority use-ports, water-related industry, airports, wildlife refuges, and water-related recreation-exist only in limited amounts and should be reserved for these purposes.
4. **Justifiable Filling.** Some Bay filling may be justified for purposes of providing substantial public benefits—such as shoreline recreational facilities (e.g., parks and

[90] https://www.bcdc.ca.gov/resources/plans/san-francisco-bay-plan/.

marinas), port terminals, or airport terminal expansions—if these same benefits could not be achieved equally well without filling.

5. **Effects of Bay Filling.** Bay filling that is consistent with the purposes listed above can provide substantial benefits to the Bay. However, filling can be harmful to the Bay, and thus, there are some tradeoffs when fill is used. Bay filling can negatively affect fish and wildlife habitat, increase water pollution, decrease the air-cooling effect of the bay, and diminish scenic beauty. Bay fill can also restore habitat for some native organisms and facilitate sea level rise. Projects must balance these effects to maximize benefits.

6. **Pressures to Fill.** As the Bay Area's population increases, pressures to fill the Bay for many purposes will increase. New flat land will be sought for many urban uses because most, if not all, of the flat land in communities bordering the Bay is already in use for residences, businesses, industries, airports, roadways, etc. Past diking and filling of tidelands and marshlands has already reduced the size of the Bay from about 787 square miles in area to approximately 442 square miles. Although some of this diked land remains, at least temporarily, as salt ponds or managed wetlands, it has nevertheless been removed from the tides of the Bay. The Bay is particularly vulnerable to diking and filling for two reasons:

    a. The Bay is shallow. About two-thirds of it is less than 18 feet deep at low tide; in the South Bay and in San Pablo Bay, the depth of the water 2 or 3 miles offshore may, at low tide, be only 5 or 6 feet, or even less.

    b. Ownership of the Bay is divided. Private owners claim about 22 percent of the Bay (including extensive holdings in the South Bay) because of sales by the state government 90 or more years ago. Cities and counties have received free grants of land from the state totaling about 23 percent of the Bay. The state now owns only about 50 percent of the Bay, and the federal government owns about 5 percent. The lands that are closest to shore, which are the most shallow and thus easiest to fill, are held by either private owners or local governments that may wish to fill for various purposes irrespective of the effects of filling on the Bay as a whole.

7. **Water Quality.** San Francisco Bay receives wastes from many municipal, industrial, and agricultural sources. Because of the regulatory authority of the State Water Resources Control Board, the San Francisco Bay Regional Water Quality Control Board, the U.S. Environmental Protection Agency, and the U.S. Army Corps of Engineers, the Bay Plan does not deal extensively with the problems and means of pollution control. Nevertheless, the entire Bay Plan is founded on the belief that water quality in San Francisco Bay can and will be maintained at levels sufficiently high to protect the beneficial uses of the Bay.

8. **Fill Safety.** Virtually all fills in San Francisco Bay are placed on top of Bay Mud. The construction of buildings on such fills creates a greater number of potential hazards to

life and property, during normal settling and during earthquakes, than does construction on rock or on dense, hard soil deposits. Adequate design measures can be taken, however, to reduce these potential hazards to acceptable levels.

BCDC's "Major Proposals of the Bay Plan"[91]

Major San Francisco Bay Plan proposals include:

1. **Develop Maritime Ports.** Port expansion and development should be planned for Alameda, Benicia, Oakland, Redwood City, Richmond, San Francisco, and Selby.
2. **Deepen Shipping Channels.** Major shipping channels from the Golden Gate to the Delta, and to Oakland, Redwood City, Richmond, and San Francisco should be deepened if they limit marine terminal activity and are economically and environmentally acceptable.
3. **Develop and Preserve Land for Water-Related Industry.** Waterfront land now used by industries that require access to deep water shipping should be continued in this use, and sufficient additional waterfront acreage should be reserved for future water-related industry.
4. **Develop Waterfront Parks and Recreation Facilities.** New shoreline parks, beaches, marinas, fishing piers, scenic drives, and hiking or bicycling pathways should be provided in many areas. The Bay and its shoreline offer particularly important opportunities for recreational development in urban areas where large concentrations of people now live close to the water but are shut off from it. Highest priority should be given to recreational development in these areas, as an important means of helping immediately to relieve urban tensions.
5. **Expand Airport Facilities on Land.** Airports around the Bay serve the entire Bay Area, and future airport planning can be effective only on a regional basis. The Bay provides an open area for aircraft to take off and land without having to fly over densely populated areas, and this is an excellent use of the water. But terminals and other airport facilities should be on existing land wherever feasible. Future airport development should be based on a regional airport plan, which should be prepared as soon as possible by a governmental agency with regionwide responsibilities for transportation planning. Studies leading to this airport plan should evaluate all reasonable alternatives for meeting the Bay Area's growing need for aviation facilities, and should specifically evaluate the needs of commercial, military, and general (small plane) aviation. Airport expansion or construction on Bay fill should be permitted only if no feasible alternatives are available.

[91] https://www.bcdc.ca.gov/resources/plans/san-francisco-bay-plan/

Development of the Bay and Shoreline: Findings and Policies[92]

Appearance, Design, and Scenic Views

The Bay Plan policies related to water quality and hydrology applicable to the Specific Plan are as follows:

- **Water Quality**
    - **Policy 1:** Bay water pollution should be prevented to the greatest extent feasible. The Bay's tidal marshes, tidal flats, and water surface area and volume should be conserved and, whenever possible, restored and increased to protect and improve water quality. Fresh water inflow into the Bay should be maintained at a level adequate to protect Bay resources and beneficial uses.
    - **Policy 3:** New projects should be sited, designed, constructed and maintained to prevent or, if prevention is infeasible, to minimize the discharge of pollutants into the Bay by: (a) controlling pollutant sources at the project site; (b) using construction materials that contain nonpolluting materials; and (c) applying appropriate, accepted and effective best management practices, especially where water dispersion is poor and near shellfish beds and other significant biotic resources.
    - **Policy 4:** When approving a project in an area polluted with toxic or hazardous substances, the Commission should coordinate with appropriate local, state, and federal agencies to ensure that the project will not cause harm to the public, to Bay resources, or to the beneficial uses of the Bay.
    - **Policy 6:** To protect the Bay and its tributaries from the water quality impacts of nonpoint source pollution, new development should be sited and designed consistent with standards in municipal stormwater permits and state and regional stormwater management guidelines, where applicable, and with the protection of Bay resources. To offset impacts from increased impervious areas and land disturbances, vegetated swales, permeable pavement materials, preservation of existing trees and vegetation, planting native vegetation, and other appropriate measures should be evaluated and implemented where appropriate.
    - **Policy 7:** Whenever practicable, native vegetation buffer areas should be provided as part of a project to control pollutants from entering the Bay, and vegetation should be substituted for rock riprap, concrete, or other hard surface shoreline and bank erosion control methods where appropriate and practicable.

[92] Only policies relevant to the Baylands Specific Plan are included. Numbering reflects the policy numbers adopted by BCDC in the Bay Plan.

- **Climate Change**
    - **Policy 2:** When planning shoreline areas or designing larger shoreline projects, a risk assessment should be prepared by a qualified engineer and should be based on the estimated 100-year flood elevation that takes into account the best estimates of future SLR and current flood protection and planned flood protection that will be funded and constructed when needed to provide protection for the proposed project or shoreline area. A range of SLR projections for mid-century and end of century based on the best scientific data available should be used in the risk assessment. Inundation maps used for the risk assessment should be prepared under the direction of a qualified engineer. The risk assessment should identify all types of potential flooding, degrees of uncertainty, consequences of defense failure, and risks to existing habitat from proposed flood protection devices (BCDC 2024).

The portion of the Project Site within 100 feet of the shoreline of San Francisco Bay is subject to permitting regulations of the BCDC because San Francisco Bay and "all areas that are subject to tidal action from the south end of the Bay to the Golden Gate … including all sloughs, and specifically, the marshlands lying between mean high tide and 5 feet above mean sea level (AMSL); tidelands (lands lying between mean high tide and mean low tide); and submerged lands (lands lying below mean low tide)" are included in BCDC jurisdiction (BCDC 2020). Specifically, all of the Brisbane lagoon is in BCDC Bay jurisdiction, as well as the length of Visitacion Creek and another tidally influenced creek (Guadalupe Creek) encompassing the northernmost portion of the lagoon. The BCDC shoreline band jurisdiction extends 100 feet from Bay jurisdiction around the entirety of the lagoon and along both sides of Visitacion Creek and the tidally influenced creek to the north of the lagoon (BCDC 2020).

Airport Land Use Compatibility

San Mateo County Airport Land Use Commission

With limited exceptions, California law requires each county with an airport within its boundaries to maintain an Airport Land Use Commission (ALUC) "to protect public health, safety, and welfare by ensuring the orderly expansion of airports and the adoption of land use measures that minimize the public's exposure to excessive noise and safety hazards within areas around public airports to the extent that these areas are not already devoted to incompatible uses." In San Mateo County, the C/CAG Board acts as the Airport Land Use Commission with three primary responsibilities:

- Coordinate airport land use compatibility planning at the state, regional, and local levels;

- Prepare and adopt an Airport Land Use Compatibility Plan[93] for each public-use airport in its jurisdiction; and
- Review plans, regulations, and other actions of local agencies and airport operators.

Airport Land Use Compatibility Plan for the Environs of San Francisco International Airport

In 2012, the San Mateo County ALUC adopted the Airport Land Use Compatibility Plan for the Environs of San Francisco International Airport. The plan includes Federal Aviation Administration (FAA)-accepted Noise Exposure Maps, a diagram that illustrates the configuration of the preliminary Airport Influence Area boundary for San Francisco International Airport (SFO), and an updated diagram of the Federal Aviation Regulations Part 77 airspace protection surfaces.

The Baylands Specific Plan is located within SFO Area A of the Airport Influence Area. The Specific Plan is in an area with 3,651 or more flights per year, or an average of 10 or more flights per day, originating from or returning to SFO. In accordance with California Business and Professions Code Section 11010 and SFO's Comprehensive Airport Land Use Plan, development within the Baylands requires a real estate disclosure of potential airport/aircraft impacts such as noise and other impacts due to the property's location within an Airport Influence Area, as part of any real estate transaction. The area is not subject to Federal Aviation Regulations Part 77 restrictions or within SFO's noise or runway safety compatibility zones.

d. City of Brisbane Plans, Ordinances, and Regulations

General Plan

The Brisbane General Plan is the primary policy document governing land use within the Baylands and the City of Brisbane. The General Plan provides the blueprint for land use and development in the city and addresses land use and community character, housing, traffic and transportation, natural resources, open space, safety, noise, local economic development, community services, and recreation. The currently adopted General Plan includes more than 900 policies and programs.

Land Use Designations

The Brisbane General Plan land use diagram designates the Specific Plan area *Baylands Planned Development* (Baylands Subarea), with the area north of the Geneva extension, east of the

[93] The Airport Land Use Plan establishes the procedures that C/CAG uses in reviewing proposed local agency actions that affect land use decisions in the vicinity of the County's airports, including San Francisco International Airport. Airport planning boundaries define the area where height, noise, and safety standards, policies, and criteria are applied to certain proposed land use policy actions.

Caltrain railroad, within the Beatty Subarea designated *Heavy Commercial* (see **Figure 3-3** in Chapter 3, *Project Description*).

The *Baylands Planned Development* designation requires that a single specific plan be prepared and adopted for the entirety of the Baylands prior to its development. The *Baylands Planned Development* designation also requires that a minimum of 25 percent of the surface land area be maintained in open space and/or open area. Residential development within the *Baylands Planned Development* designation is limited to the area west of the Caltrain right-of-way and north of the easterly extension of Main Street from its current terminus at Bayshore Boulevard.

The General Plan describes *Heavy Commercial* designation as providing for "bulk sales, offices, meeting halls, vehicle storage and equipment maintenance. It also allows outside storage of vehicles and equipment. No materials storage, other than that associated with bulk sales and no processing of materials are permitted. Subareas designated Heavy Commercial are required to have an adopted specific plan to guide development in the area."

The Brisbane Lagoon is designated *Marsh/Lagoon/Bayfront*, including *Lagoon* and *Bayfront* in the Baylands Subarea and *Bayfront* in the Beatty Subarea.

Allowable Maximum Development Intensity

The General Plan limits the maximum building intensity for site-specific development and sets open space requirements for each of the Baylands land use designations as follows:

- **Baylands Subarea**
    - *Baylands Planned Development:* 1,800 to 2,200 dwelling units with a maximum of 6.5 million square feet of commercial/office development and an additional 500,000 square feet of hotel use. Maximum floor area ratio (FAR)[94] of 2.4 south of Visitacion Creek and a maximum FAR of 4.8 north of the creek. A minimum of 25 percent of the area to be retained as open space/open area.
    - *Bayfront and Lagoon:* 100 percent of the area is to be retained as open space/open area. The maximum floor area ratio is therefore 0.0.
- **Beatty Subarea**
    - *Heavy Commercial:* Allowable floor area ratio of 0 - 1.0. Open space/open area to be provided per zoning ordinance requirements.
    - *Bayfront:* 100 percent of the area to be retained as open space/open area.

[94] FAR refers to the total gross floor area of buildings divided by gross land area of a given site.

General Plan Policies

In addition to land use designations and development intensity, the General Plan includes citywide policies affecting development within the Baylands along with policies specific to the Baylands. These policies, along with an analysis of the consistency of proposed Baylands development with those policies, are provided in **Table 4.3-1**.

Sustainability Framework for the Brisbane Baylands

Brisbane General Plan Policy BL.1 G, states that the "required specific plan for the Baylands shall include a sustainability program for new development consistent with the principles of the Sustainability Framework for the Brisbane Baylands Framework," which was the final report of a committee appointed by the City Council to create an approach to achieving sustainable development within the Baylands. The Framework, which was intended as an aspirational rather than a regulatory document was accepted by the City Council on November 5, 2015.

The Sustainability Framework identifies key sustainability principles to establish a balance whereby people enjoy a high quality of life within the productive capacity of the environment, and humanity's ecological demands do not exceed nature's capacity to sustain life and replenish natural resources.

The Sustainability Framework is organized around the following 10 principles that are referenced in General Plan Policy BL.1 G:

1. **Zero Carbon Buildings.** Making buildings more energy efficient and delivering all energy with renewable technologies.
2. **Zero Waste.** Reducing waste, reusing where possible, and ultimately sending zero waste to landfills.
3. **Sustainable Transportation.** Using low carbon modes of transport and good planning to reduce emissions and the need to travel with.
4. **Local and Sustainable Materials.** Using sustainable healthy products, with low embodied energy, sourced locally, made from renewable or waste resources.

Relationship between CEQA and Sustainability Principles

CEQA focuses on identifying and mitigating the significant physical environment that will occur as the result of discretionary actions taken by public agencies. In doing so, CEQA addresses a broad spectrum of environmental topics, including many, but not all, of the issues inherent in the sustainability principles addressed in the *Sustainability Framework for the Baylands*.

While many sustainability measures, such as global climate change (GHG emissions), resource depletion, water supply, and declining wildlife habitats, are directly or indirectly addressed by CEQA, other sustainability principles such as economic vitality, social equity, and promoting meaningful lives and well-being are not addressed in CEQA. In the traditional (and simplified) view of "sustainability" as consisting of environmental quality, economic vitality, and social equity, CEQA addresses only environmental quality. Thus, many sustainability issues become part of a project's *planning* process, rather than its *environmental* review.

While CEQA is a valuable tool to evaluate and mitigate the significant adverse effects of a project, the planning review process and implementation of a community's General Plan provide a broader set of actions that can be used to promote community sustainability.

5. **Local and Sustainable Food.** Choosing low impact, local, seasonal, and organic diets and reducing food waste.
6. **Sustainable Water.** Using water more efficiently in buildings and in the products people buy, and addressing local flooding, wetland, and stormwater pollution.
7. **Open Space and Habitat.** Protecting and restoring biodiversity and natural habitats through appropriate land use and integration into the built environment.
8. **Culture and Heritage.** Reviving local identity and wisdom; supporting and participating in the arts.
9. **Economic Vitality with Equity and Ecology.** Creating ecologically based economies that support equity and inclusive communities.
10. **Health, Safety, and Happiness.** Encouraging active, safe, meaningful lives to promote good health and well-being.

4.3.4 RELEVANT SPECIFIC PLAN REQUIREMENTS

The Specific Plan proposes a land use development program to implement General Plan Amendment GP-1-18 and Measure JJ, including a maximum of 2,200 dwelling units, 6.5 million square feet of commercial, and 500,000 square feet of hotel use (see Draft EIR **Figure 3-5** and **Table 3-1)**. The Specific Plan also commits 29.5 percent of its Year 2100 land area to habitat preservation and recreational use. The Specific Plan's land use program defines permitted land uses, building types, and intensity of development overall (see EIR Section 3.3.2 c). Development of the Baylands land use plan would be required to comply with the Specific Plan's zoning and development standards, which are presented at district, block, and building levels.

In addition to land use and development standards, Specific Plan Section 3.3.2 e describes the proposed circulation network and identifies the components and design standards for movement of vehicles, pedestrians, and bicyclists; and access to transit to provide connectivity within and through the Baylands. A phasing program that ties development of residential and commercial uses to the provision of infrastructure and site amenities is also provided.

4.3.5 SIGNIFICANCE CRITERIA

The following criteria were used to determine the significance of land use and planning impacts.

Threshold LUP-1: **The Baylands Specific Plan would cause a significant impact if connectivity within Brisbane or other communities would be eliminated or reduced to the extent that:**

- **A neighborhood or community would become physically separated from one or more other neighborhoods or communities;**
- **Residents would have their access to transit, commercial centers, employment areas, schools, parks, or governmental services or facilities substantially diminished; or**
- **Employees would have their access to transit, commercial centers, or governmental services or facilities substantially diminished.**

Threshold LUP-2: **The Baylands Specific Plan would cause a significant impact due to a conflict between the Baylands Specific Plan and a land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect if a conflict with the provisions of any of the following documents would result in a significant physical environmental effect not disclosed elsewhere in this EIR:**

- **Brisbane General Plan (City of Brisbane)**
- **Plan Bay Area 2050 (Metropolitan Transportation Commission [MTC], Association of Bay Area Governments [ABAG])**
- **MTC Transit-Oriented Communities Policy (Resolution No. 4530)**
- **San Francisco Bay Plan (Bay Conservation and Development Commission [BCDC])**
- **Airport Land Use Compatibility Plan for the Environs of San Francisco International Airport (San Mateo County Airport Land Use Commission [ALUC])**

4.3.6 PROJECT IMPACTS AND MITIGATION MEASURES

a. Impact LUP-1: Physically Divide an Existing Community

Methodology for Determining Significance

Analysis of this impact includes an evaluation of existing physical barriers between the Baylands and surrounding areas, such as the Central Brisbane and Sierra Point areas within Brisbane, as well as existing physical barriers between the Baylands and lands to the west, northwest, and north in Daly City and San Francisco.

The analysis of Threshold LUP-1 recognizes that:

- The Specific Plan area is already physically divided from the balance of the Brisbane community by Bayshore Boulevard, and the site itself is physically divided along a north-south axis by the Caltrain railroad right-of-way. In addition, the Recology solid waste facility physically separates the Baylands from areas to the north and northeast in San Francisco (e.g., Candlestick Point, Hunter Point).
- Because there may be multiple routes available between any two given points, creating a barrier may or may not actually physically divide a community but still adversely affect connectivity between neighborhoods or communities. Thus, the analysis of this threshold focuses on the extent to which the Specific Plan might substantially diminish vehicular, pedestrian, and bicycle connectivity between neighborhoods or communities, as well as access to transit.
- The Specific Plan area would be constructed in increments over time during which surrounding neighborhoods and communities would evolve and change.[95]

Proposed grading for Baylands development encompasses moving 2,500,000 cubic yards of soil by truck from the eastern portion of the site to the western portion of the site to be placed as engineered fill. Because (1) Beatty Avenue and Lagoon Road provide connectivity between the existing Brisbane community and the US 101 freeway, and (2) Lagoon Road serves as the sole roadway connection between the Sierra Point area and the Brisbane community and beyond, disruptions of these roadways by haul trucks during construction could have an adverse effect on community connectivity, the potential for which is analyzed below. In addition, two large-scale Brisbane businesses—Golden State Lumber and the Kinder Morgan tank farm—are located on Tunnel Avenue. Because disruption to that roadway could also have a substantial adverse effect on community connectivity, the extent of such disruption during Baylands grading activities is analyzed.

Proposed grading activities and roadway construction could adversely affect community connectivity and result in a significant impact if Beatty Avenue, Lagoon Road, or Tunnel Avenue were to be temporarily closed or have traffic flow substantially disrupted during site grading or construction. The extent to which site grading and construction within the Baylands would maintain or temporarily eliminate or disrupt existing connectivity along these roadways is therefore evaluated.

The extent to which the Baylands Specific Plan's land development and on- and off-site infrastructure might create new physical barriers or increase the effectiveness of existing barriers is also examined, including the potential for temporary barriers to be created during Baylands construction. This analysis includes consideration of development standards and

[95] The assumed sequencing of Baylands development used to evaluate physical environmental impacts is presented in **Table 3-8**.

requirements contained in the Baylands Specific Plan such as the extension of Geneva Avenue from Bayshore Boulevard to Beatty Avenue, as well as roadway, pedestrian, bicycle, and transit connections intended to improve connectivity and mobility.

Baylands development would adversely affect future connectivity between neighborhoods and communities and result in a significant impact if it would eliminate or substantially reduce the ability to provide expanded vehicular, pedestrian, and bicycle connectivity, as well as access to transit needed to meet the needs of future neighborhoods or communities.

Impact Assessment

The Baylands site sits along the edge of San Francisco Bay and the US 101 freeway and is separated from lands to the west by Bayshore Boulevard and the office and light industrial buildings at Crocker Industrial Park; from lands to the north by the Recology facility; and from lands to the south by the Brisbane Lagoon. The Baylands site itself is physically divided into east and west areas by the existing Caltrain right-of-way and is further divided between north and south by Visitacion Creek. Existing connections between US 101 freeway interchanges and Sierra Point through the Baylands to Bayshore Boulevard and Central Brisbane are circuitous.

Construction Impacts

While construction activities are temporary conditions and do not result in permanent changes to land use or the transportation network, Baylands construction activities are expected to occur from 2027 through 2042 (see **Table 3-8**). Baylands development would require temporary use of public roadway rights-of-way for activities such as staging of construction materials or equipment within the sidewalk or adjacent parking areas and/or travel lanes. Compliance with Brisbane Municipal Code Chapter 12.04 would require applicants for site-specific development and infrastructure projects to secure encroachment permits and approval of Traffic Control Plans for any construction activity that occurs within City rights-of-way. In addition, construction activities affecting state facilities, such as freeway interchanges at Alana Way and Beatty and Sierra Point Parkway are subject to Caltrans encroachment permits.

Baylands construction activities could require temporary lane closures or otherwise temporarily reduce connectivity at the following locations/times:

- **Site grading.** Tunnel Avenue will retain its existing configuration with one through lane in each direction throughout Baylands grading operations and serve as a haul route for the movement of soil from the eastern to the western portion of the site, accommodating round trip truck hauls throughout the day, including the AM and PM peak hours. Depending on the number of haul trips at any given time, traffic flow would be disrupted and connectivity reduced along Tunnel Avenue, particularly if queueing of haul trucks waiting to load or unload spills out onto area roadways.

- **Realignment of Lagoon Road.** Lagoon Road is proposed to be realigned to protect it from sea level rise and to connect directly to the existing southbound US 101 off- and on-ramps. Potential disruptions to traffic and loss of connectivity along the existing Lagoon Road could occur at the westernmost point of the realigned road section and at the current southbound US 101 off- and on-ramps. Because existing Lagoon Road, in combination with existing Sierra Point Parkway, is a vital link that connects much of Brisbane to the US 101 freeway and connects Sierra Point to the balance of Brisbane, any closure of these existing roadways, even temporarily, would substantially reduce connectivity for Brisbane residents and Sierra Point workers and hotel visitors.
- **Connection of the Geneva Avenue extension to Beatty Avenue.** Temporary lane closures and narrowing of lanes with resulting loss of connectivity would occur at the existing Beatty Avenue-Alana Way intersection when construction of the Geneva Avenue extension connects Geneva Avenue to that existing intersection.
- **Improvements to Tunnel Avenue.** Following grading operations, Tunnel Avenue will be improved to include a two-way center left-turn lane along with one lane in each direction, construction of which would result in temporary disruption to traffic flow and reduced accessibility to the Caltrain Bayshore station due to temporary lane closures and narrowing of travel lanes.
- **Bayshore Mobility Plan improvements.**[96] Construction of Bayshore Boulevard improvements would occur within existing roadway rights-of-way and could cause temporary lane closures and delays along the corridor and its intersections with Geneva Avenue and Main Street.
- **Construction of off-site potable water lines**. Construction of off-site water lines within Bayshore Boulevard and Guadalupe Canyon Parkway would occur beneath the roadway and require temporary lane closures.
- **Off-site recycled water line improvements.** Construction of off-site water lines within Bayshore Boulevard, Airport Boulevard, and streets within the Sierra Point and Oyster Point portions of the City of South San Francisco would occur beneath these roadways and require temporary lane closures.
- **Construction of buildings and aboveground infrastructure within the Baylands**. Construction of buildings and aboveground infrastructure would require temporary lane narrowing or closures when connecting sites to underground infrastructure.

[96] Public Resources Code Section 21080.25(b)(1) exempts "Pedestrian and bicycle facilities that improve safety, access, or mobility, including new facilities, within the public right-of-way" from CEQA. The Bayshore Mobility Plan meets the relevant criteria set forth in Public Resources Code Section 21080.25(c), such as being located in an urbanized area in an existing public right-of-way would not demolish affordable housing units and would not increase automobile capacity.

- **Fire Station construction at 140 Valley Drive.** Temporary narrowing of the travel lane adjacent to the site would be required for relocation of the bus stop and crosswalk, as well as for construction of driveway access.
- **Off-site electrical utility line improvements.** Trenching for an underground utility line across Bayshore Boulevard and along Geneva Avenue to connect the Baylands to the Martin Substation would cause temporary lane closures and disrupt operations at the heavily traveled intersection of Bayshore Boulevard and Geneva Avenue.
- **Deliveries of equipment and construction materials**. Deliveries of construction equipment and materials could disrupt traffic and reduce connectivity unless adequate staging areas are well located and capable of accepting multiple simultaneous deliveries.

Long-Term Post-Construction Operational Impacts

Under existing conditions, the Specific Plan area is already physically divided from the rest of the Brisbane community and surrounding lands by Bayshore Boulevard, industrial uses, the Recology solid waste management facility, and the Brisbane Lagoon. The Specific Plan would not create or expand any existing physical barriers between established neighborhoods or communities or create any new barriers.

The Specific Plan would improve connectivity between existing residential neighborhoods and employment centers. Geneva Avenue would be extended from Bayshore Boulevard to Beatty Avenue, providing a more direct and convenient route from Central Brisbane and nearby portions of Daly City to the Bayshore Caltrain station and the US 101 freeway. The Specific Plan would also realign Lagoon Road to provide more direct access to the US 101 freeway and protect it from future sea level rise. Sierra Point Parkway would be extended from its current terminus north to the future Geneva Avenue extension. The provision of shuttle systems as part of Baylands development would also enhance connectivity between the Baylands, Central Brisbane, hotels, office buildings within Sierra Point, and the Caltrain Bayshore station.

The Geneva Avenue extension would provide for the establishment of bus rapid transit service between developing areas in San Francisco north and northeast of the Baylands and the Bayshore Caltrain station; however, the Specific Plan proposes merging exclusive bus rapid transit lanes with other roadway lanes over the Genera Avenue bridge, while providing exclusive bus rapid transit lanes along the rest of the Geneva Avenue extension. The Specific Plan includes a comprehensive plan for bicycle and pedestrian mobility within the Baylands, including connections between the Baylands and Central Brisbane. The Specific Plan also provides for shuttle connections between the Baylands and Central Brisbane.

As shown in **Table 4.3-1**, General Plan Program C.1.b requires development and implementation of a Bayshore Boulevard design plan that would facilitate turning movements onto and from Bayshore Boulevard for Brisbane residents and businesses and thereby increase connectivity between existing neighborhoods within Brisbane along with enhanced pedestrian

and bicycle facilities (see Draft EIR Section 3.3.4, *Bayshore Mobility Plan*, and Section 4.8.4, *Transportation Improvements in Addition to the Specific Plan*).

Significance Conclusion for Impact LUP-1

Construction

Hauling soil from the eastern to the western portion of the Baylands along Tunnel Avenue and other two-lane roadways would result in traffic delays and reduced connectivity, particularly if queueing of haul trucks spills out onto public roadways adjacent to sites being graded.

Roadway improvements, installation of underground utilities, and construction of buildings and aboveground infrastructure would require temporary roadway lane closures and cause temporary delays along area roadways. In addition, deliveries of construction equipment and materials could disrupt traffic and reduce connectivity unless off-street staging areas are capable of accepting multiple simultaneous deliveries and avoid queueing of delivery trucks on adjacent public roadways. Construction activities within roadway rights-of-way would be required to meet applicable requirements for issuance of encroachment permits that would minimize disruptions and ensure traffic safety; however, connectivity would be substantially reduced due to temporary:

- Blockage of access to existing facilities within the Baylands, including but not limited to:
    - Recology solid waste management facilities;
    - Golden State Lumber Company;
    - Kinder Morgan tank farm;
    - City of Brisbane Corporation Yard; and
    - Bayshore Sanitary District pump station.
- Loss of (1) turning movements at existing intersections or (2) use of existing crosswalks and bus stops.
- Blocking use of bicycle, pedestrian, or transit facilities; parking lot or garage access; or access for residents through residential neighborhoods, such as Blanken Avenue, due to hauling of soils on public roadways, construction staging, or movement of construction materials, vehicles, or equipment.

Long-Term Post-Construction Operational Impacts

No new physical barriers between existing neighborhoods or communities would be constructed. By extending Geneva Avenue, improving Tunnel Avenue, and realigning Lagoon Road, connectivity between (1) the Brisbane community and (2) the US 101 freeway as well as Sierra Point would be enhanced. In addition, Specific Plan development would provide a

shuttle system connecting the Baylands, Sierra Point, and Central Brisbane, and would enhance bicycle and pedestrian system within the Baylands.[97]

Improvements would be constructed along Bayshore Boulevard providing safe movement onto and from the roadway, enhancing mobility for Brisbane residents and employees due to improved access to transit, commercial and employment centers, schools, parks, and public services and facilities. These improvements would also provide for ongoing through traffic movements for daily commuters along Bayshore Boulevard between San Francisco and Daly City to the north and northwest and San Mateo County and Silicon Valley to the south.

A less than significant operations impact would therefore result.

Program EIR Mitigation Measures

MM LUP-1a: Construction Management Plans (Program EIR Mitigation Measure 4.N-12). In conjunction with all construction permits, site-specific development projects shall develop, submit for City review and approval, and implement Construction Management Plans that specify measures that would reduce impacts on motor vehicle, bicycle, pedestrian, and transit circulation. Construction Management Plans shall include, but not necessarily be limited to, the following:

- Location of construction staging areas for materials, equipment, and vehicles.
- Notification procedures for adjacent property owners and public safety personnel regarding timing of major deliveries, detours, and lane closures.
- Identification of haul routes for movement of construction vehicles that would minimize impacts on vehicular and pedestrian traffic, circulation, and safety; and provision for monitoring surface streets used for haul routes so that any damage and debris attributable to the haul trucks can be identified and corrected by the project applicant.
- Provisions for removal of trash generated by construction activity.
- A process for responding to, and tracking, complaints pertaining to construction activity, including identifying an on-site complaint manager.

[97] Impact TRA-2 concludes that not providing continuous bus rapid transit lanes on the Geneva Avenue bridge would have a significant impact on transit usage. However, because the extension would provide a roadway connection that does not currently exist, overall connectivity would be improved. In addition, because trail systems do not currently exist through the Baylands, gaps that would be created between Baylands trails and trails in the adjacent area would result in a significant impact in relation to bicycle and pedestrian travel. Thus, while Impact TRA-2 would be significant and require mitigation, loss of connectivity and Impact LUP-1 would be less than significant in relation to operations.

Significance Conclusion for Impact LUP-1 with Implementation of Program EIR Mitigation Measures

Mitigation Measure MM LUP-1a requires preparation and implementation of a Construction Management Plan for each construction permit and site-specific development project associated with the Baylands Specific Plan. These Construction Management Plans would be required to specify the measures that would be undertaken to reduce impacts and would be subject to City review and approval. As a result, significant impacts could still result, and additional mitigation is required.

Additional Mitigation Measures

MM LUP-1b: Maintain Connectivity along Area Roadways during Construction. The Construction Management Plan required by Mitigation Measure MM LUP-1a for City approval in compliance with Brisbane Municipal Code Chapter 12.04 shall include provisions to meet the following performance standards:

- Access to the following facilities shall remain open all times throughout Baylands construction:
  - Recology solid waste management facilities;
  - Golden State Lumber Company;
  - Kinder Morgan tank farm;
  - City of Brisbane Corporation Yard; and
  - Bayshore Sanitary District pump station.
- Turning movements at existing intersections shall be maintained at all times during construction. If existing crosswalks and bus stops cannot feasibly be available for use at all times during construction, appropriate alternative facilities shall be provided.
- Site grading and each site-specific development project shall provide sufficient construction staging in appropriate locations such that construction staging, including construction vehicles or materials, will not block bicycle; pedestrian facilities, or transit facilities; roadway travel lanes; or parking garage access.
- The identification of haul routes for movement of construction vehicles shall be designed to minimize impacts on vehicular and pedestrian traffic, circulation, and safety through use of arterials or designated truck routes, avoiding travel on local or collector roadways through residential neighborhoods, such as Blanken Avenue, and provision of traffic control

measures at construction driveways as required through Brisbane Municipal Code Chapter 12.04.

- Identify the routes that construction vehicles will use for the delivery of construction materials (e.g., lumber, tiles, piping, windows) to access the site, including any needed traffic controls and detours.
- Allow hauling or transport of oversize loads between 9:00 a.m. and 3:00 p.m. only, Monday through Friday, unless approved otherwise by the City Engineer.
- Require all construction-related parking and staging of vehicles to be kept out of the adjacent public roadways and instead be kept on site.

Significance Conclusion for Impact LUP-1 with Implementation of All Mitigation Measures

Implementation of Mitigation Measures MM LUP-1a and MM LUP-1b would maintain connectivity (one through lane in each direction) along Lagoon Road between Tunnel Avenue and Sierra Point Parkway, as well as Sierra Point Parkway between the US 101 southbound and northbound on- and off-ramps at all times throughout Baylands construction, thereby reducing construction impacts to less than significant.

b. Impact LUP-2: Conflicts with Adopted Plans, Policies, or Regulations

Methodology for Determining Significance

Environmental Effects Resulting from Inconsistencies with Plans, Policies, or Regulations

Analysis of the 2025 Specific Plan project's consistency with local and regional plans and policies is intended to fulfill the requirements of CEQA Guidelines Section 15125(d), focusing on whether conflicts with plans, policies, and regulations adopted for the purpose of avoiding or mitigating an environmental effect would have a significant environmental effect. Because any particular inconsistency would not necessarily lead to a physical environmental effect, only those provisions of relevant plans, policies, and regulations for which inconsistencies could directly or indirectly cause or contribute to a physical environmental effect are analyzed. The consistency of the 2925 Specific Plan project with relevant provisions of the Brisbane General Plan, Plan Bay Area 2050, the Metropolitan Transportation Commission's Transit-Oriented Communities Policy (Resolution 4530), the San Francisco Bay Plan, and the Airport Land Use Compatibility Plan for the Environs of San Francisco International Airport was then analyzed and is documented in **Table 4.3-1** and **Table 4.3-2**.

General Plan Inconsistencies:

Relationship between Identifying a Significant CEQA Impact and Determining the Specific Plan to be Inconsistent with the General Plan

Inconsistency with any particular provision of the General Plan would result in a significant CEQA impact if the inconsistency would cause or contribute a significant environmental effect. However, such an inconsistency would not necessarily mean that the Specific Plan is inconsistent with General Plan.

Courts have acknowledged that general plans attempt to balance a range of competing interests, and that it is nearly, if not absolutely, impossible for a project to be in perfect conformity with each and every provision. Additionally, in reaching consistency conclusions, state law permits consideration of the consequences of a project denial, which can result in other policy inconsistencies. For example, Government Code Section 65589.5 explains that the potential consequences of limiting the approval of housing are "reduced mobility, urban sprawl, excessive commuting, and air quality deterioration."

Consistency with the general plan is therefore determined by considering consistency with the plan as a whole and not with each individual provision. The Baylands Specific Plan would be considered to be consistent with the General Plan if it would meet the general intent of the plan and not preclude the attainment of the General Plan's primary goals and objectives. See Appendix A.3 for analysis of the Baylands Specific Plan's consistency with the Brisbane General Plan.

Impact LUP-2 would be significant if an inconsistency with a provision of these plans would directly or indirectly cause or contribute to a significant environmental effect for which mitigation is required.

Impact Assessment

Environmental Effects Resulting from Inconsistencies with Plans, Policies, or Regulations

Table 4.3-1, below, evaluates the consistency of Baylands development with General Plan policies and the potential for significant environmental effects to result from any inconsistencies with the specific provisions of the plan.

Consistency of the Baylands Specific Plan with regional plan policies, including Plan Bay Area 2050, MTC's Transit-Oriented Community policy, and the San Francisco Bay Plan is evaluated in **Table 4.3-2** in relation to the potential for significant environmental effects to result from inconsistencies with the specific provisions of these plans.

Significance Conclusion for Impact LUP-2

Environmental Effects Resulting from Inconsistencies with Plans, Policies, or Regulations

As demonstrated in **Table 4.3-1**, the Baylands Specific Plan would be inconsistent with the following General Plan Policies and Programs:

- **General Plan Policy LU.11 and Program BL.3b** in relation to views of San Francisco Bay, which causes a significant Aesthetics and Visual Resources Impact (AES-1a).
- **General Plan Policy C.41**, in relation to parking standards, which exacerbates a significant and unavoidable GHG emissions impact (GHG-1).[98]
- **Policy 176** in relation to noise from pile driving operations required for constructing buildings (Impact NOI-1).

As demonstrated in **Table 4.3-2**, the Specific Plan would also be inconsistent with MTC's Transit-Oriented Community policy. Thus, Impact LUP-2 would be significant.

[98] See also **Table 4.3-2** in relation to MTC Transit-Oriented Communities Policy (Resolution No. 4530).

Table 4.3-1: Consistency of the Baylands Specific Plan with the Brisbane General Plan

General Plan Policies and Programs	Specific Plan Consistency with General Plan Policy/Program	Would a Significant Physical Environmental Effect Result from an Inconsistency with this provision?
General Plan Land Use and Development Intensity Requirements		
The General Plan limits the maximum building intensity for site-specific development and sets open space requirements for each of the land use designations within the Project Site as follows: • **Baylands Subarea** ○ *Baylands Planned Development:* 1,800 to 2,200 dwelling units with a maximum of 6.5 million square feet of commercial/office development and an additional 500,000 square feet of hotel use. Maximum floor area ratio (FAR) of 2.4 south of Visitacion Creek and a maximum FAR of 4.8 north of the creek. A minimum of 25 percent of the area to be retained as open space/open area. ○ *Bayfront and Lagoon:* 100 percent of the area is to be retained as open space/open area. The maximum floor area ratio is therefore 0.0. • **Beatty Subarea** ○ *Heavy Commercial:* Allowable floor area ratio of 0 - 1.0. Open space/open area to be provided per zoning ordinance requirements. ○ *Bayfront:* 100 percent of the area to be retained as open space/open area. The proposed fire station relocation site is designated Trade Commercial, which represents a mix of commercial uses including warehouses, distribution facilities, offices, retail uses, restaurants, commercial recreation, personal services, as well as light industrial,	The Specific Plan's development program provides for development of 2,200 dwelling units with a maximum of 6.5 million square feet of commercial/office development and an additional 500,000 square feet of hotel use. While the Specific Plan permits a maximum of 2,200 dwelling units consistent with the General Plan, each of the Specific Plan's residential land use categories permits a range of building types with no minimum density requirements. For example, while the Multi-Family High land use designation provides for 20+ story buildings up to 270 in height, it also permits three-story townhome development. As a result, areas designated Multi-Family High could theoretically be developed largely or even exclusively with three-story townhomes. Other residential land use designations could also theoretically be developed with similar lower density development. The Specific Plan designates 29.5 percent of the Specific Plan's Year 2100 land area to be retained as open space/open area. Areas designated Bayfront and Lagoon in the General Plan are to be retained as open space/open area. A General Plan amendment is proposed to place the entirety of the Specific Plan area within the General Plan Baylands Subarea and subject to its maximum building intensity standards. The relocated Fire Station No. 81 would be consistent with its Trade Commercial land use designation.	No The 2025 Specific Plan project is consistent with this provision.

General Plan Policies and Programs	Specific Plan Consistency with General Plan Policy/Program	Would a Significant Physical Environmental Effect Result from an Inconsistency with this provision?
research and development, and similar uses. Public and semi-public uses are also permitted.		
Chapter V, Land Use		
Plan Policy LU.2: Development south of the Bayshore Basin drainage channel shall maintain a low profile, permitting low or mid-rise buildings, not to exceed six stories in height, in order to preserve the existing views of San Francisco and San Francisco Bay as seen from Central Brisbane, and to maximize the amount of landscape and open space or open area in this portion of the subarea.	The Specific Plan proposes sustainable infrastructure uses south of Visitacion Creek.	No The 2025 Specific Plan project is consistent with this provision.
Policy LU.11: In the context of respecting private property rights, make every effort to preserve and enhance public views of the Mountain and the Bay.	Draft EIR Section 4.5, *Aesthetic and Visual Resources*, evaluates the effects Baylands development would have on views of the Bay and San Bruno Mountain. Appropriate mitigation measures to protect scenic vistas are provided.	**Yes** **Impact AES-1** **Blockage of public views of the Bay and San Bruno Mountain.**
Program BL.3b: The following design approaches shall not be included in the required specific plan or any development proposal: i. Buildings or building groups that block view corridors to the Bay, or appear as "fortresses" or "walls" lining the Bayfront, the Lagoon or any arterial street.	General Plan prohibits buildings or building groups to be designed such that they would "block view corridors to the Bay or appear as 'fortresses' or 'walls' lining the Bayfront, the Lagoon or any arterial street." As demonstrated in Figure 4.5-2, closely spaced 3- to 4-story residential buildings along Bayshore Boulevard would "present a solid mass of development that would obscure most of the existing view" and would thus be inconsistent with the General Plan Program.	**Yes** **Impact AES-1** **Building groups appears as solid masses that block public views of the Bay and San Bruno Mountain.**
Policy LU.15: Encourage the maintenance and upgrading of structures and sites that have played important roles in the City's history.	Specific Plan implementation will include restoration and adaptive reuse of the historic Roundhouse within the Baylands.	No The 2025 Specific Plan project is consistent with this provision.
Policy LU.21: Preserve open areas with biological value and/or significant topographic characteristics at the perimeter of the City that maintain Brisbane as separate and distinct from nearby communities.	Brisbane Lagoon, Icehouse Hill, and Visitacion Creek will be retained in permanent open space. Restoration programs will be implemented to improve habitat quality.	No The 2025 Specific Plan project is consistent with this provision.
Policy LU.23: Retain sufficient distances between development and designated open space and natural areas to enhance and respect the amenity and value of the resource.	The Baylands Specific Plan provides for separation of sensitive habitat areas from development areas and recreational activities. As discussed in Section 4.6, *Biological Resources*, trails planned within and adjacent to habitat areas could adversely affect their biological functions. Mitigation measures for significant adverse effects are provided in Section 4.6.	No The 2025 Specific Plan project is consistent with this provision.

General Plan Policies and Programs	Specific Plan Consistency with General Plan Policy/Program	Would a Significant Physical Environmental Effect Result from an Inconsistency with this provision?
Chapter VI, Transportation and Circulation		
Policy C.1: Design the City's roadway system to emphasize mobility for Brisbane residents and businesses, accommodate bicycle and pedestrian in addition to vehicular movement, and provide for comfortable and safe travel within the community to shopping, employment, and recreation, as well as to transit and the Highway 101 freeway.	Specific Plan contains design standards for roadways to accommodate concurrent safe use by vehicles, pedestrians, and bicyclists, including green shared streets. The Specific Plan roadway system improves access to the Bayshore Caltrain Station and US 101 freeway for existing Brisbane residents, as well as for San Francisco residents in neighborhoods to the north.	No The 2025 Specific Plan project is consistent with this provision.
Program C.1.b: Develop design plans for Bayshore Boulevard, the Geneva Avenue extension, and interchanges along the 101 freeway that address the effects of regional through traffic within Brisbane and enhances mobility for Brisbane residents and businesses through a combination of roadway and intersection, transit, bicycle, and pedestrian facility improvements that would not cause a substantial increase in vehicle miles traveled (VMT) on Bayshore Boulevard or other routes through the City. As part of this design plan, evaluate (1) whether changes in design speeds along Bayshore Boulevard could improve mobility within the City; (2) the feasibility of shifting a portion of regional through traffic from Bayshore Boulevard onto other routes, such as Sierra Point Parkway by extending that roadway north to the 101 freeway interchange at Beatty Avenue, and (3) appropriate routing of trucks to and from the Crocker Park area.	As part of the planning review for the Baylands Specific Plan, a mobility plan for Bayshore Boulevard was developed to both facilitate mobility for Brisbane residents and businesses, as well as to accommodate regional through traffic.	No The 2025 Specific Plan project is consistent with this provision.
Program C.1.c Prepare, adopt, and implement a mobility improvement fee program to fund the multi-modal improvements called for in the design plan for Bayshore Boulevard and interchanges along the 101 freeway.	The Baylands Specific Plan and associated development agreement provide for full implementation of the Bayshore Boulevard mobility plan.	No The 2025 Specific Plan project is consistent with this provision.

General Plan Policies and Programs	Specific Plan Consistency with General Plan Policy/Program	Would a Significant Physical Environmental Effect Result from an Inconsistency with this provision?
Policy C.3: Design turning movements and traffic signal timing at intersections so as to avoid the queueing of vehicles at intersection from backing up and adversely affecting operations at another intersection. Design turning movements and traffic signal timing at freeway interchanges cause queueing of vehicles from the intersection onto the freeway mainline.	As discussed in Draft EIR Section 4.8, *Transportation*, Specific Plan development would contribute to queueing of vehicles from off-ramp intersections onto the freeway mainline at the existing Alana/Harney interchange and the US 101 southbound interchange at Sierra Point Parkway. Construction of Candlestick interchange improvements as envisioned in the Bi-County Transportation Study would resolve queueing issues at that interchange for which Baylands development would be required to make a fair share cost contribution. In addition, a roundabout would be constructed at the US 101 southbound on- and off-ramps, if approved by Caltrans, or a traffic signal with two off-ramp storage lanes if Caltrans does not approve a roundabout to ensure vehicle queues do not extend back to the mainline.	No The 2025 Specific Plan project is consistent with this provision.
Policy C.4 "Plan for an additional east–west corridor to redirect non-destination traffic away from Bayshore Boulevard and to provide more direct access to Highway 101." *Program C.4.a* "Pursue an extension of Geneva Avenue, connecting with the Candlestick Highway 101 Interchange that provides for bus rapid transit and connection to the Bayshore Caltrain station." **Policy C.36** "Seek opportunities to install and improve transit facilities, establish multi-modal connections, and increase the service network." *Program C.36.d* "Cooperate with San Mateo County Transit District (SamTrans), and other appropriate agencies, to establish bus rapid transit (BRT) systems where practicable." **Bi-County Transportation Study** proposes a 6-lane cross-section for Geneva Avenue with 4 vehicular travel lanes (2 in each direction) and 2 lanes for BRT (1 lane in each direction)	The Specific Plan proposes a 6-lane cross-section for the Geneva Avenue extension with 4 vehicular travel lanes (2 in each direction) and 2 lanes for BRT (1 lane in each direction), except for the Geneva Avenue bridge over the Caltrain where a 4-lane cross-section with no BRT lanes is proposed. Constructing the Geneva Avenue bridge without BRT lanes would inhibit the ability for regional agencies to provide BRT service as transit vehicles would be forced to merge with vehicular traffic and cross the bridge in mixed flow traffic in both directions, thus degrading the quality of transit service and conflicting with the local and regional plans for a BRT route. The proposed cross-section would also impair emergency vehicle response.	**Yes** **Impact TRA-2** **Inhibit pedestrian, bicycle, or transit use.** **Impact TRA-3** **Transportation safety hazards.**

General Plan Policies and Programs	Specific Plan Consistency with General Plan Policy/Program	Would a Significant Physical Environmental Effect Result from an Inconsistency with this provision?
Policy C.17: Maintain traffic flow and continue to improve arterial streets to accommodate vehicular, bicycle, and pedestrian movement.	Pursuant to CEQA Guidelines Section 15064.3 (a), "a project's effect on automobile delay shall not constitute a significant environmental impact." Consistency with the bicycle and pedestrian movement portion of this policy is discussed below. The Specific Plan provides for a comprehensive system of bicycle and pedestrian facilities providing connectivity within the Specific Plan area. The analysis provided in Section 4.8 identifies several gaps in pedestrian and bicycle connections between the Baylands and surrounding lands.	No The 2025 Specific Plan project is consistent with this provision.
Policy C.21: The City shall provide for the development of Complete Streets consistent with Government Code Sections 65040.2 and 65302 and subsequent applicable Complete Streets legislation) to meet the needs of all users of "streets, roads and highways". Such users include bicyclists, children, youth, families, persons with disabilities, motorists, movers of commercial goods, pedestrians, users of public transportation, seniors, and first responders.	The Specific Plan provides for a comprehensive system of bicycle and pedestrian facilities providing connectivity within the Specific Plan area. The analysis provided in Section 4.8, *Transportation*, identifies several gaps in pedestrian and bicycle connections between the Baylands and surrounding lands, however.	No The 2025 Specific Plan project is consistent with this provision.
Policy C.22: Integrate Complete Streets infrastructure and design features, such as sidewalks, bikeways and transit stops into street design and construction to create safe and inviting environments for people to walk, bicycle and use public transportation. *Program C.22.b.* Incorporate Complete Streets infrastructure elements into new streets, street retrofits and certain maintenance projects to encourage multiple modes of travel, as appropriate to the context and determined reasonable and practicable by the City.	The Specific Plan provides for a comprehensive system of bicycle and pedestrian facilities providing connectivity within the Specific Plan area. The analysis provided in Section 4.8, *Transportation*, identifies several gaps in pedestrian and bicycle connections between the Baylands and surrounding lands.	No The 2025 Specific Plan project is consistent with this provision.
Policy C.24: For new multifamily, mixed use or commercial development projects subject to discretionary review that would affect the public right-of-way, incorporate and implement Complete Streets elements at each stage of the development process as determined reasonable and practicable by the City.	The Specific Plan provides for a comprehensive system of bicycle and pedestrian facilities providing connectivity within the Specific Plan area. The analysis provided in Section 4.8, *Transportation*, identifies several gaps in pedestrian and bicycle connections between the Baylands and surrounding lands. EIR Mitigation Measure MM TRA-2 would ensure adequate off-site pedestrian and bicycle connectivity.	No The 2025 Specific Plan project is consistent with this provision.

General Plan Policies and Programs	Specific Plan Consistency with General Plan Policy/Program	Would a Significant Physical Environmental Effect Result from an Inconsistency with this provision?
Policy C.26: Continue to connect Brisbane's bikeway and pedestrian system to the County and regional networks.	The Specific Plan provides for a comprehensive bicycle system connected to local and regional facilities, including completion of the Bay Trail through the site.	No The 2025 Specific Plan project is consistent with this provision.
Policy C.29: Provide for the safety of bicyclists by dedicating bikeways where practicable, by installing appropriate signing and striping, and by maintaining the pavement. *Program C.29.a:* Install as many bikeways as can safely be accommodated and are economically feasible.	The Specific Plan provides for a comprehensive system of bicycle facilities. The design of this system will be subject to Public Works Director review and approval to ensure provision of appropriate signing and striping. Adequate ongoing maintenance of Baylands bicycle facilities will also be required. The Specific Plan provides for a comprehensive system of bicycle facilities providing access throughout the Baylands.	No The 2025 Specific Plan project is consistent with this provision.
Policy C.30: Require new development and redevelopment to plan for and construct bikeways and/or bicycle parking facilities, as determined reasonable and practicable by the City.	The Specific Plan provides for a comprehensive system of bicycle facilities, including requirements for bicycle parking.	No The 2025 Specific Plan project is consistent with this provision.
Policy C.31: All new arterial streets and any existing arterials that are improved should provide for bicycle transportation.	The Specific Plan provides for a comprehensive system of bicycle facilities, including facilities along Geneva Avenue and off-road trails providing bicycle access throughout the Baylands.	No The 2025 Specific Plan project is consistent with this provision.
Policy C.32: Provide or require bicycle parking facilities at major destination points. *Program C.32.a:* Include bicycle lockers in park-and-ride facilities. *Program C.32.b:* Encourage business and employment centers to provide bicycle-parking facilities for their employees. *Program C.32.c:* Design and install bicycle-parking facilities to meet best current engineering practices.	The Specific Plan provides for a comprehensive system of bicycle facilities, including requirements for bicycle parking facilities. The Specific Plan does not include park-and-ride facilities. An existing park-and-ride lot is located adjacent to the southern end of the Baylands along Bayshore Boulevard and Tunnel Avenue. Provision of both short-term and long-term bicycle parking is required for office and retail development within the Baylands. The Specific Plan's bicycle systems will be constructed to meet current best design practices.	No The 2025 Specific Plan project is consistent with this provision.
Policy C.34: Maximize safe pedestrian facilities and access to all areas of the City, as reasonable and feasible.	The Specific Plan provides for a comprehensive system of pedestrian facilities providing access throughout the Baylands. The design of this system will be subject to review and approval of the Public Works Director.	No The 2025 Specific Plan project is consistent with this provision.

General Plan Policies and Programs	Specific Plan Consistency with General Plan Policy/Program	Would a Significant Physical Environmental Effect Result from an Inconsistency with this provision?
Policy C.35: Require pedestrian amenities with new development and expansion of existing uses, as appropriate.	The Specific Plan provides for a comprehensive system of pedestrian facilities providing access throughout the Baylands.	No The 2025 Specific Plan project is consistent with this provision.
Policy C.36: Seek opportunities to install and improve transit facilities, establish multi-modal connections and increase the service network.	The Baylands Specific Plan proposes a plaza adjacent to the Bayshore Caltrain station's west platform to serve as a drop-off area and gathering place for the station. In addition, a shuttle system will be implemented connecting Baylands development to the Caltrain station and providing a connection from Central Brisbane to the station. The Specific Plan's bicycle and pedestrian systems also connect to the plaza and Bayshore station.	No The 2025 Specific Plan project is consistent with this provision.
Program C.36.b Request more frequent scheduling of Caltrain stops at the Bayshore station as warranted by demand.	The addition of up to 2,200 dwelling units, 6.5 million square feet of commercial office use, and 500,000 square feet of hotel development substantially increase the potential for increased use of the Bayshore station and the possibility that the Joint Powers Authority would increase the number of daily Caltrain stops at Bayshore.	No The 2025 Specific Plan project is consistent with this provision.
Program C.36.d Cooperate with San Mateo County Transit District (SamTrans), and other appropriate agencies, to establish bus rapid transit (BRT) systems where practicable.	The proposed extension of Geneva Avenue through the Baylands would substantially enhance the feasibility of providing BRT service from developments to the north in San Francisco through the Baylands to the Bayshore Caltrain station.	No The 2025 Specific Plan project is consistent with this provision.
Program C.36.i Require new developments that are subject to the City's transportation demand measures (TDM) ordinance to also incorporate measures that facilitate Complete Streets compliance measures, such as transit stops, shuttle stops, and bicycle facilities.	The Baylands Specific Plan provides for a shuttle system connecting Baylands development to the Bayshore Caltrain Station along with comprehensive pedestrian and bicycle systems.	No The 2025 Specific Plan project is consistent with this provision.
Policy C.37: Plan for park-and-ride facilities at the Caltrain Station and other major transit stops.	The Baylands Specific Plan provides the opportunity for a park-and-ride facility at the Bayshore Caltrain station but is not specifically proposed.	No The 2025 Specific Plan project is consistent with this provision.

General Plan Policies and Programs	Specific Plan Consistency with General Plan Policy/Program	Would a Significant Physical Environmental Effect Result from an Inconsistency with this provision?
Policy C.41: Maintain an appropriate amount of off-street parking in commercial areas. *Program C.41.a:* Review the parking regulations for office, commercial and industrial uses and consider setting minimum and maximum parking standards where transit alternatives are readily available.	The Specific Plan sets an overall maximum of 11,000 parking spaces within the Baylands and establishes maximum per unit and per 1,000 square foot maximum parking ratios. However, the Specific Plan permits Multi-Family Low, Townhome, and duplex/single family housing types to provide 1.25 spaces per unit, exceeding the maximum in MTC Resolution 4530. No minimum parking standards are set in the Specific Plan. The intent of setting maximum but not minimum parking standards for commercial and other development in the Baylands is to encourage non-vehicular travel, particularly for internal travel within the Baylands.	**Yes** **Impact GHG-1** **Inconsistency with this policy exacerbates the 2025 Specific Plan project's significant and unavoidable GHG emission impact.**
Policy C.44: Consider potential effects on mobility and emergency evacuation in making land use decisions.	Draft EIR Section 4.8, *Transportation*, evaluates the effects Baylands development would have on mobility and emergency response/evacuation and concluded that the Specific Plan's proposed four-lane roadway cross-section on the Geneva Avenue bridge over the Caltrain right-of-way and the two-lane roadway cross-section along Tunnel Avenue would have adverse effects on emergency response during peak travel hours. Mitigation Measure MM TRA-2 provides for a roadway cross-section on the Geneva Avenue bridge that includes four lanes for automobile traffic (tow in each direction) with one bus rapid transit lane that would provide for adequate emergency response during all travel hours and a continuous two-way left-turn lane along Tunnel Avenue, which would also provide for adequate emergency response during all travel hours.	No The 2025 Specific Plan project is consistent with this provision.
Policy C.46: Consider transit use and facilities as well as Transportation Demand Management Programs in making land use decisions.	The analyses undertaken for Draft EIR Section 4.8, *Transportation*, estimated project-related transit use, including implementation of transportation demand management programs consistent with City ordinance.	No The 2025 Specific Plan project is consistent with this provision.
Policy C.48: In conjunction with new development and expansion of existing uses, require that new streets and any existing private streets serving the property be improved to City standards and offered for dedication as public streets.	Any private roadways proposed within the Baylands will be required to be developed to City standards, would be subject to review and approval by the Public Works Director, and offered for dedication to the City.	No The 2025 Specific Plan project is consistent with this provision.
Policy C.51: Incorporate Green Streets best practices, as appropriate to the context, for new streets and street retrofits, to enhance the pedestrian and bicyclist experience, to promote low impact development (LID) consistent with state water board initiatives to reduce the impacts of development on stormwater resources and to enhance the natural environment.	The Baylands Specific Plan includes comprehensive bicycle and pedestrian facilities plans to encourage bicycling and walking within the Baylands. Impacts of urban runoff from Baylands roadways is analyzed in Draft EIR Section 4.14, *Hydrology and Water Quality*, which concludes impacts would be less than significant.	No The 2025 Specific Plan project is consistent with this provision.

General Plan Policies and Programs	Specific Plan Consistency with General Plan Policy/Program	Would a Significant Physical Environmental Effect Result from an Inconsistency with this provision?
Chapter VII, Open Space		

Combined Standard for Mini/Neighborhood/Linear Parks: 10.5 acres per 1,000 residential population, which represents the 1994 level of service.
Community Parks: 8.0 acres per 1,000 residential population, which represents the top of the range of the National Recreation and Parks Association standard.
	The Baylands Specific Plan retains 157 acres in open space/open area, representing 29.5 percent of the site's Year 2100 land area (532.3 acres).
	The Baylands projected resident population of 4,905 would thus require 51.5 acres of Mini/Neighborhood/ Linear parks to meet the General Plan standard. In addition, 39.2 acres of community parks would be needed to meet the General Plan standard.
	Included in the Specific Plan's open space plan are lands for outdoor recreation and lands for preservation of resources. Of these 157 acres of open space, 64.4 acres are dedicated to outdoor recreation, including:
	• Active Recreation Areas
	  ○ Bay Trail (20.0 acres)
	  ○ Community Fields (7.4 acres)
	• Community Greens
	  ○ Baylands Park (5.8 acres)
	  ○ Sunnydale Park (0.8 acres)
	  ○ Roundhouse Park (3.9 acres)
	• Recreational facilities within Ecological Greenspaces
	  ○ Lagoon Park (5.3 net acres of outdoor recreation and trails)
	  ○ The Ecological Park (7.3 acres)
	  ○ Visitacion Creek (3.1 net acres of trails)
	  ○ Icehouse Hill Park (2.1 net acres of outdoor recreation and trails)
	  ○ Baylands Preserve (7.7 acres net of trails)
	• Bayshore Station Plaza (1.4 acres)
	The 64.4 acres of parks and recreational facilities that would be developed within the Specific Plan area represents 13.13 acres per 1,000 population, which is less than the General Plan's 18.5 acres per 1,000 population aspirational goal for local and community parks. However, the Specific Plan provides 29.3 percent of the site's Year 2100 land area in open space, exceeding the General Plan 25 percent requirement. In addition, Baylands Specific Plan parks and recreational areas exceed the 10.16 acres per 1,000 population currently being provided to Brisbane residents and was therefore determined not to result in significant impacts on the City's existing park system.
		No
		The 2025 Specific Plan project is consistent with this provision.

General Plan Policies and Programs	Specific Plan Consistency with General Plan Policy/Program	Would a Significant Physical Environmental Effect Result from an Inconsistency with this provision?
Policy 81.1: Work to preserve open space lands to protect the natural environment and to provide outdoor educational and recreational opportunities consistent with the sensitivity of the resource.	The Specific Plan's 157-acre open space/area system includes lands for preservation of resources and lands for outdoor recreation. The Specific Plan also includes a signage program that will provide environmental education.	No The 2025 Specific Plan project is consistent with this provision.
Policy 82: Encourage the preservation, conservation, and restoration of open space to retain existing biotic communities, including rare and endangered species habitat, wetlands, watercourses and woodlands.	Site remediation and landfill closure require removal of most existing biological habitat outside of Icehouse Hill. The Specific Plan therefore proposes extensive habitat creation and enhancement, including Visitacion Creek, Lagoon Park, the Ecological Park, and other areas. Icehouse Hill butterfly habitat will also be enhanced.	No The 2025 Specific Plan project is consistent with this provision.
Policy 85: Encourage the preservation and conservation of aquatic resources in Brisbane: the Lagoon, the Bayfront and the Marsh.	Draft EIR Section 4.6, *Biological Resources*, evaluated the impacts of Baylands development on aquatic resources and concluded that impacts would be less than significant.	No The 2025 Specific Plan project is consistent with this provision.
Program 85a: Seek opportunities to utilize aquatic areas for recreational and educational activities consistent with the sensitivity of the resource.	The Specific Plan proposes trails within Lagoon Park and along the periphery of Visitacion Creek. In addition, recreational facilities are proposed within Lagoon Park. As discussed in Draft EIR Section 4.6, *Biological Resources*, these facilities would have a less than significant impact.	No The 2025 Specific Plan project is consistent with this provision.
Policy 88: Develop parks to maximize passive recreational opportunities. *Program 88c:* Require impact fees or exactions as contributions to the acquisition, development and maintenance of passive open space, park and recreation facilities in conjunction with the mitigation requirements for development projects	The majority of the Baylands proposed 157-acre open space system consists of passive recreation and habitat conservation areas. Baylands open space areas will be improved as part of site development. The Specific Plan makes provision for the ownership and maintenance of on-site open space and recreational facilities.	No The 2025 Specific Plan project is consistent with this provision.
Policy 90: On an ongoing basis, aggressively seek opportunities to preserve open space.	The Baylands Specific Plan proposes a 157-acre open space system, which represents 29.2 percent of the site's Year 2100 land area. The Baylands' most sensitive areas, including the lagoon, Icehouse Hill, and Visitacion Creek will be preserved in open space with enhanced habitat.	No The 2025 Specific Plan project is consistent with this provision.
Chapter IX, Conservation		
Policy 118: Preserve areas containing rare and endangered species habitat to the extent allowed by law and available resources.	The Baylands' most sensitive areas—the lagoon, Icehouse Hill, and Visitacion Creek—will be preserved in open space with enhanced habitat as confirmed by the evaluations and mitigation measures set forth in this EIR (see Section 4.6, *Biological Resources*).	No The 2025 Specific Plan project is consistent with this provision.

General Plan Policies and Programs	Specific Plan Consistency with General Plan Policy/Program	Would a Significant Physical Environmental Effect Result from an Inconsistency with this provision?
Policy 123: Conserve important biological communities through sensitive project design. *Program 123a:* In land use development applications, consider the siting of structures and utilities so as to conserve identified biological communities.	The Baylands' most sensitive areas, including the lagoon, Icehouse Hill, and Visitacion Creek will be preserved in open space with enhanced habitat as confirmed by the evaluations and mitigation measures set forth in this EIR (see Section 4.6, *Biological Resources*).	No The 2025 Specific Plan project is consistent with this provision.
Policy 127: Encourage the use of plants that are compatible with the natural flora in landscape programs.	The plant palette proposed as part of the Specific Plan is consistent with planned protection of natural vegetation within the Baylands, as confirmed by the evaluations undertaken for this EIR (see Section 4.6, *Biological Resources*).	No The 2025 Specific Plan project is consistent with this provision.
Policy 128: Encourage the use of native plants in landscape programs that provide food and shelter to indigenous wildlife.	The plant palette proposed as part of the Specific Plan is consistent with planned protection of natural vegetation within the Baylands, as confirmed by the evaluations undertaken for this EIR (see Section 4.6, *Biological Resources*).	No The 2025 Specific Plan project is consistent with this provision.
Policy 129: Require erosion controls to mitigate soil disturbance.	Grading and site-specific development within the Baylands will be required to implement best management practices for erosion control.	No The 2025 Specific Plan project is consistent with this provision.
Policy 130: Conserve water resources in the natural environment.	Baylands development includes an on-site recycled water facility that will treat sewage generated within the Baylands and the service areas of the City of Brisbane and Bayshore Sanitary District to provide recycled water for non-potable uses within the Baylands and City of South San Francisco. As discussed in Section 4.16, *Utilities, Service Systems, and Water Supply*, implementation of a series of water conservation measures, including provision and use of recycled water supplies, would provide an adequate water supply for Baylands development.	No The 2025 Specific Plan project is consistent with this provision.
Program 130a: As an ongoing part of land use planning and CEQA analysis, determine whether proposals could affect water resources.	Draft EIR Section 4.16 addresses water resources and concludes the impacts of Baylands development on water resources would be less than significant.	No The 2025 Specific Plan project is consistent with this provision.
Program 130b: Require, as appropriate, project analysis of drainage, siltation, and impacts on vegetation and on water quality.	This Draft EIR provides analyses of drainage and water quality (Section 4.14, *Hydrology and Water Quality*), as well as impacts related to siltation (Section 4.15, *Geology, Soils, and Seismicity*)	No The 2025 Specific Plan project is consistent with this provision.

General Plan Policies and Programs	Specific Plan Consistency with General Plan Policy/Program	Would a Significant Physical Environmental Effect Result from an Inconsistency with this provision?
Policy 130.1: The City requires restoration of wetland losses. The determination of which land areas are wetlands will be done by those Federal and State agencies having jurisdiction. The City, however, is especially concerned with those wetlands surrounding the perimeter of the Brisbane Lagoon, the Bay shoreline, the Levinson Marsh and the Quarry sediment ponds. The ratios of restoration may exceed the regulatory agencies' mitigation minimums.	Analysis of impacts on wetlands is provided in Section 4.6, *Biological Resources*, which concludes that impacts would be less than significant.	No The 2025 Specific Plan project is consistent with this provision.
Policy 130.4: Wetland and mitigation areas that are mitigations for project impacts must be protected by recorded deed restrictions.	Adequate protections will be implemented to ensure that habitat areas created and enhanced pursuant to the provisions of the Specific Plan will be protected in perpetuity.	No The 2025 Specific Plan project is consistent with this provision.
Policy 130.5: It is Brisbane's desire that mitigation for Brisbane's wetland losses occur somewhere within the jurisdictional boundaries or sphere of influence of the City of Brisbane, if feasible.	The Baylands Specific Plan proposes that all habitat areas to be created and enhanced pursuant to the provisions of the Specific Plan will be within the Specific Plan area.	No The 2025 Specific Plan project is consistent with this provision.
Policy 131: Emphasize the conservation of water quality and of riparian and other water-related vegetation, especially that which provides habitat for native species, in planning and maintenance efforts.	To ensure that development within the Baylands is protective of water quality and water-related vegetation, evaluations have been undertaken in this EIR, including appropriate mitigation measures (see Section 4.6, *Biological Resources*, and Section 4.14, *Hydrology and Water Quality*).	No The 2025 Specific Plan project is consistent with this provision.
Policy 132: Recognize the importance of the Brisbane Lagoon and the Levison Marsh as wildlife habitats, valuable community resources and drainage basins, and cooperate with responsible agencies in their conservation.	The Baylands Specific Plan provides for protection of the lagoon and drainage areas, as confirmed by the evaluations undertaken for this EIR (see Section 4.6, *Biological Resources*, and Section 4.14, *Hydrology and Water Quality*). To implement this policy, the City has sought input from responsible agencies regarding the evaluations contained in this EIR as part of its public review.	No The 2025 Specific Plan project is consistent with this provision.
Policy 133: Reduce the amount of sediment entering waterways. *Program 133a:* Participate in programs to improve water quality in the Lagoon and the Bay. *Program 133b:* Require all development, especially that involving grading, to exercise strict controls over sediment.	The evaluations contained in this EIR along with applicable mitigation measures (see Section 4.15, *Geology, Soils, and Seismicity*, and Section 4.14, *Hydrology and Water Quality*) confirm that Baylands development would minimize the amount of sediment entering waterways.	No The 2025 Specific Plan project is consistent with this provision.

General Plan Policies and Programs	Specific Plan Consistency with General Plan Policy/Program	Would a Significant Physical Environmental Effect Result from an Inconsistency with this provision?
Policy 134: Reduce the amount of pollutants entering waterways. *Program 134a:* Cooperate with the Water Quality Control Board and County Department of Environmental Health and participate in the NPDES Program to monitor and regulate point and non-point discharges. *Program 134c:* Encourage wetlands restoration projects to remove or fix toxicants and reduce siltation. *Program 134d:* Utilize wetlands restoration projects to remove or fix toxicants and reduce siltation where appropriate.	The evaluations contained in this EIR along with applicable mitigation measures (see Section 4.14, *Hydrology and Water Quality*) confirm that Baylands development would minimize the volume of pollutants entering waterways.	No The 2025 Specific Plan project is consistent with this provision.
Policy 136: Encourage the maintenance and rehabilitation of structures important to the history of Brisbane.	The Baylands Specific Plan provides for restoration and adaptive use of the historic Roundhouse, as well as preservation of the Machinery & Equipment building.	No The 2025 Specific Plan project is consistent with this provision.
Policy 137: Conserve prehistoric resources in accordance with State and Federal requirements.	While Baylands development could have an impact on as-yet undiscovered archaeological or Tribal cultural resources, Mitigation Measures MM CUL-2a through MM CUL-2c would reduce impacts and conserve prehistoric resources in accordance with State and federal requirements.	No The 2025 Specific Plan project is consistent with this provision.
Policy 138: Encourage conservation of domestic water. *Program 138a.* Require the use of water conserving fixtures in new construction and remodeling projects. *Program 138b:* Encourage the use of water conserving landscape and irrigation systems. *Program 138c:* Utilize, if safe and appropriate, recycled water for landscape irrigation and dust control. *Program 138e:* As a part of the land use planning process, consider how water conserving features are incorporated into project design.	The Water Supply Assessment prepared for the Baylands development identifies an array of water conservation measures that would be undertaken, including an on-site recycled water facility treating sewage generated within the Baylands, City of Brisbane, and Bayshore Sanitary District to supply recycled water for non-potable use.	No The 2025 Specific Plan project is consistent with this provision.

General Plan Policies and Programs	Specific Plan Consistency with General Plan Policy/Program	Would a Significant Physical Environmental Effect Result from an Inconsistency with this provision?
Policy 139: Promote the conservation of non-renewable energy resources.	The Baylands Specific Plan provides for 92,445 MWh of on-site renewable generation in addition to meeting CALGreen Tier 1 energy conservation standards.	No The 2025 Specific Plan project is consistent with this provision.
Policy 140: Encourage energy-efficient building design and site planning. Program 140b: As a part of the review of land use applications for subdivisions, specific plans and new non-residential and multi-family projects, encourage the design and siting of structures and the use of landscape materials in terms of utilizing natural resources for heating and cooling.	The Specific Plan includes explicit building energy conservation standards in addition to required compliance with CALGreen Tier 1 energy efficiency standards.	No The 2025 Specific Plan project is consistent with this provision.
Policy 142: Continue to support vehicle trip-reduction programs to conserve nonrenewable fuels.	Baylands development will be consistent with CCAG and City of Brisbane transportation demand management plan requirements.	No The 2025 Specific Plan project is consistent with this provision.
Policy 143: Maximize opportunities to recycle solid waste.	Baylands development will implement zero waste programs undertaken by Recology.	No The 2025 Specific Plan project is consistent with this provision.
Chapter X, Community Health and Safety		
Policy 149: Construct new buildings and retrofit existing ones to withstand seismic forces. *Program 149a:* Require that all new construction meet current codes for seismic stability. *Program 149e:* Require soils reports and engineering recommendations for structural stability in conjunction with building permit applications in areas which have been identified as prone to seismically induced landslides or subsidence in seismic events.	Geotechnical reports prepared for the western and eastern portions of the site identify specific seismic criteria to be implemented. All new construction within the Baylands will be required to comply with the seismic design standards in place at the time buildings permits are issued.	No The 2025 Specific Plan project is consistent with this provision.

General Plan Policies and Programs	Specific Plan Consistency with General Plan Policy/Program	Would a Significant Physical Environmental Effect Result from an Inconsistency with this provision?
Policy 152: Consider issues of slope stability in conjunction with development applications. *Program 152a:* Require soil and geologic investigations in areas identified as prone to slope instability. Consider both on-site and off-site impacts. *Program 152b:* Unless adequate mitigating measures are undertaken, prohibit land alteration, including any grading and structural development, in identified areas of slope instability. *Program 152c:* Require topographical and soils information for all projects on slopes identified over 20%. (See Figure X-G.) *Program 152d:* Certificates of compliance shall be conditioned upon a comprehensive and detailed slope analysis. *Program 152e:* Encourage placement of structures away from areas identified as prone to slope failure or erosion unless effective mitigation measures are proposed as a part of the project design. *Program 152f:* Require erosion control programs and revegetation on all disturbed slopes.	Geotechnical reports prepared for the western and eastern portions of the site identify design criteria for ensuring safety of manufactured slopes within the Baylands. All site grading will be required to comply with applicable building code requirements as well as the recommendations of site-specific geotechnical analyses.	No The 2025 Specific Plan project is consistent with this provision.
Policy 153: Require the construction of new improvements and the upgrade of existing stormwater infrastructure to mitigate flood hazard. *Program 153b:* Work with Daly City and affected property owners to design improvements to alleviate flooding on the section of Bayshore Boulevard between Geneva Avenue and Main Streets.	The Baylands Specific Plan includes a comprehensive plan to upgrade and install new stormwater drainage facilities to comply with the flood protection criteria adopted as part of General Plan Amendment GP-1-18/Measure JJ.	No The 2025 Specific Plan project is consistent with this provision.
Policy 158: Provide a level of fire protection proportional to the size, risks and service demands of the community within budgetary constraints.	Baylands development requires a new fire station to house a new ladder company within the City. With implementation of the mitigation measures	No

General Plan Policies and Programs	Specific Plan Consistency with General Plan Policy/Program	Would a Significant Physical Environmental Effect Result from an Inconsistency with this provision?
Program 158a: 1n conjunction with development applications, evaluate fire service requirements, response times and levels of risk. Require impact fees and exactions to maintain the level of service and to provide for any special equipment needs.	contained in this EIR, appropriate levels of fire protection relative to the size, risks, and service demands of Baylands development would be provided.	The 2025 Specific Plan project is consistent with this provision.
Policy 160: Provide a level of police protection of persons and property proportional to the size and law enforcement needs of the community within budgetary constraints. *Program 160a:* In conjunction with land use development applications, evaluate police service requirements and response times. Require impact fees and exactions to maintain the level of service.	The level of police protection and facilities needed to support Baylands development was determined by the Brisbane Police Department and was evaluated in Draft EIR Section 4.17, *Public Services and Facilities*. As noted above, a fiscal impact analysis undertaken for the Baylands Specific Plan demonstrated that Baylands development would generate sufficient municipal income to offset the costs of providing municipal services, including police services to the Baylands.	No The 2025 Specific Plan project is consistent with this provision.
Policy 163: Continue to ensure a three-minute emergency response average and a ten-minute average response to other calls for service.	To maintain current service levels, Baylands development requires expansion of the Brisbane Police Department to provide additional 24/7 shifts and move from its current single beat to a two-beat system. Thus, additional sworn officers and civilian employees will be required. In addition, Baylands development will provide an on-site police facility that would allow officers to fill out reports and hold prisoners until they are booked into the county jail.	No The 2025 Specific Plan project is consistent with this provision.
Policy 166: Protect the community's health, safety, welfare, natural resources and property through regulation of the handling and storage of hazardous materials, with specific focus on prevention of accidents.	This EIR evaluated impacts related to the handling and storage of hazardous materials and concluded that compliance with federal, state, and local regulations would ensure less than significant impacts, along with adequate protection of the community's health, safety, welfare, natural resources, and property.	No The 2025 Specific Plan project is consistent with this provision.
Policy 172: Establish that it is of the highest priority that contaminated lands in Brisbane be remediated. *Program 172c:* Require private property owners to remediate contaminated lands consistent with State and Federal requirements.	Approval of remedial action plans by regulatory agencies along with approval of the Title 27 landfill closure plan was obtained by the applicant prior to public release of the EIR. Completion of site remediation and landfill closure under regulatory agency oversight is required prior to development within OU-SM, OU-2, and the former Brisbane landfill, respectively.	No The 2025 Specific Plan project is consistent with this provision.
Policy 173: The City shall not grant approval of a development project on a contaminated site unless a plan for remediation of the site has first been approved and adopted by all federal, state, and local agencies having jurisdiction over the remediation plan.	Approval of plans by regulatory agencies and completion of site remediation and Title 27 landfill closure was obtained by the applicant prior to public release of the EIR. Completion of site remediation and landfill closure under regulatory agency oversight is required to be completed prior to development within OU-SM, OU-2, and the former Brisbane landfill, respectively.	No The 2025 Specific Plan project is consistent with this provision.

General Plan Policies and Programs	Specific Plan Consistency with General Plan Policy/Program	Would a Significant Physical Environmental Effect Result from an Inconsistency with this provision?
Policy 175: Assure that any development otherwise permitted on lands filled with municipal waste is safe by implementing the following programs. *Program 175a:* Exchange information with the California Integrated Waste Management Board, San Mateo County Health System Environmental Health Division and other responsible agencies regarding the requirements for safe and successful landfill development, utilizing the experience of Sierra Point. *Program 175b:* Require evidence that scientific testing and verification has taken place to the satisfaction of regulatory agencies. *Program 175c:* Encourage property owners of filled lands to complete all testing and related requirements of the Federal, State and local agencies well in advance of requesting land use permits from the City.	The Regional Water Quality Control Board and the San Mateo County Health System have approved a final closure plan consistent with the requirements of Title 27. Construction of a required landfill cap and other action required by the approved final landfill closure plan must be completed prior to approval of development overlying the required landfill cap. Final landfill closure is proposed to be undertaken on a phased basis.	No The 2025 Specific Plan project is consistent with this provision.
Policy 176: Minimize the intrusion of unwarranted and intrusive noise on community life.	Baylands geotechnical conditions are such that as many as 70 percent of Baylands buildings 5 stories in height or more to be constructed with pier foundations. While alternatives to traditional impact pile driving are available, such alternatives may not be suitable for use in all buildings requiring pier foundations. Thus, development of mid- and high-density residential and commercial development within the Baylands will involve some degree of impact pile driving, including the potential for impact pile driving to occur simultaneously as multiple sites. Noise impacts that would result from Baylands development have been evaluated in Draft EIR Section 4.12, *Noise and Vibration*, which concluded that construction activities, including impact pile driving, could be designed to comply with City noise ordinance requirements. However, the cumulative effects of construction activities and multiple buildings undergoing pile driving at the same time would be intrusive.	**Yes** **Impact NOI-1** **Installation of pile foundations.** **Impact NOI-2** **Increased Traffic Noise.**

General Plan Policies and Programs	Specific Plan Consistency with General Plan Policy/Program	Would a Significant Physical Environmental Effect Result from an Inconsistency with this provision?
Policy 179: Require the incorporation, when feasible, of new road or landscaping features that buffer noise impacts on adjacent areas.	The Baylands Specific Plan provides design requirements for Specific Plan roadways that include roadway landscaping. In addition, the Specific Plan establishes building setbacks that will aid in noise reduction. Noise impacts that would result from Baylands development have been evaluated in Section 4.12, *Noise and Vibration*, of this EIR, which concluded that, with the implementation of the mitigation requirements (including measures aimed at establishing noise buffering features), Project-related noise impacts would be less than significant.	No The 2025 Specific Plan project is consistent with this provision.
Policy 182: Support efforts to reduce vehicle trips and keep smooth traffic flow to the extent that the number of trips and stop-and-start traffic contribute to traffic noise.	The Specific Plan's improved access to and a mix of residential and commercial uses near transit supports efforts to reduce vehicle trips. In addition, providing improved access to US Highway 101, along with proposed off-site roadway improvements, would assist in reducing congestion that contributes to traffic noise. Baylands development will implement a transportation demand management program to reduce trip generation consistent with City ordinance requirements.	No The 2025 Specific Plan project is consistent with this provision.
Policy 183: Coordinate land uses and construction conditions to minimize noise impacts of the Caltrain corridor and major highway arterials on adjacent land uses.	The Specific Plan proposes multi-family residential uses as close as 50 feet from the Caltrain tracks, which is considered "normally unacceptable" for such uses. To minimize noise impacts, Draft EIR Section 4.12, *Noise and Vibration*, includes mitigation for residential uses in proximity to the Caltrain rail line, including: • Use of acoustically rated building materials (insulation and windows); • Construction of architectural noise barriers between sources and receptors; and • Implementation of landscaping or other non-noise sensitive buffer zones between sources and receptors.	No The 2025 Specific Plan project is consistent with this provision.

General Plan Policies and Programs	Specific Plan Consistency with General Plan Policy/Program	Would a Significant Physical Environmental Effect Result from an Inconsistency with this provision?
Policy 184: In conjunction with development applications and other land use decisions, consider the potential for noise generation from, as well as noise impacts on, the project or area. *Program 184a:* Use the State Guidelines for land use compatibility to determine noise impacted uses. *Program 184b:* Require acoustical studies for development applications in areas identified as noise impacted and potential noise generators. *Program 184c:* For such projects, require a noise attenuation or a mitigation program to be submitted as a part of the project design.	Draft EIR Section 4.12, *Noise and Vibration*, identifies noise-related impacts that could result from Baylands development and provide mitigation measures needed to reduce impacts to less than significant levels based on State Guidelines for land use compatibility.	No The 2025 Specific Plan project is consistent with this provision.
Policy 193: As a part of land use development analysis, consider the impacts on air resources that will be generated by a project through mobile sources. *Program 193a:* Consider the design of roadways, transit facilities, bikeways and pedestrian access in all subdivisions, specific plans and other land use proposals to evaluate whether and to what extent the design addresses air quality issues. *Program 193b:* In conjunction with land use development applications and CEQA review, evaluate whether a proposal may have a significant effect on air quality because of mobile emissions. Require environmental impact analysis and mitigation plans and monitoring, as appropriate. *Program 193c:* Discourage drive-up service windows and similar uses that generally result in vehicle idling.	The evaluations contained in Draft EIR Section 4.9, *Air Quality*, identify mobile source air quality impacts that would result from Baylands development and provide mitigation measures to reduce impacts to less than significant.	No The 2025 Specific Plan project is consistent with this provision.

General Plan Policies and Programs	Specific Plan Consistency with General Plan Policy/Program	Would a Significant Physical Environmental Effect Result from an Inconsistency with this provision?
Policy 194: Attempt to minimize dependence on automobile travel by encouraging transit, bicycle and pedestrian alternatives and incorporating alternatives to the automobile in land use planning and project design. *Program 194b:* Provide bicycle and pedestrian access to all areas of the City to provide alternatives to automobile use. *Program 194c:* Require all new development to include design principles that are transit oriented and otherwise reduce dependence on the automobile.	By providing a mix of residential and commercial office uses in proximity to transit, along with improved access to transit and improved bicycle and pedestrian connections throughout the Baylands, the Specific Plan aims to minimize dependence on automobile travel. A detailed evaluation of automobile vehicle miles traveled associated with proposed Baylands development was undertaken and is presented in Draft EIR Section 4.8, *Transportation*, which determined that impacts would be less than significant.	No The 2025 Specific Plan project is consistent with this provision.
Policy 197: Continue to improve existing roadways to reduce congestion in order to reduce emissions generated by "stop-and-go" driving. *Program 197a:* Use traffic management systems, such as signage and timed signals, to facilitate traffic flow and reduce congestion.	As part of the planning review for proposed Baylands development, specific measures to be required of Baylands development were formulated to reduce congestion and emissions of air pollutants and GHG. Included in these measures is a mobility plan for Bayshore Boulevard to address the combined impacts of (1) Baylands and other development in Brisbane and (2) through traffic along that roadway.	No The 2025 Specific Plan project is consistent with this provision.
Policy 198: Actively participate in and support the development and implementation of transportation system management plans (TSMs) and transportation demand management measures (TDMs).	The City of Brisbane adopted a Transportation Demand Management (TDM) ordinance (Municipal Code Chapter 10.52) in 2023 that aligns its policies with county and state requirements. The Specific Plan would be subject to the highest tier of compliance (Tier 3) and required to implement all TDM measures presented in **Table 4.8-10**.	No The 2025 Specific Plan project is consistent with this provision.
Policy 203: Consider issues of stationary emissions in land use planning and project review. *Program 203a:* As part of land use planning, establish buffer zones between sensitive receptors and significant emissions sources, including uses that cause offensive odors or dust.	The evaluations undertaken for this EIR include consideration of stationary source emissions from future Baylands development.	No The 2025 Specific Plan project is consistent with this provision.
Policy 209: Require, as feasible, all trunk water lines to be installed in dedicated public streets.	The Baylands Specific Plan includes a water facilities master plan that provides for the installation of new trunk water lines within dedicated public streets.	No The 2025 Specific Plan project is consistent with this provision.

General Plan Policies and Programs	Specific Plan Consistency with General Plan Policy/Program	Would a Significant Physical Environmental Effect Result from an Inconsistency with this provision?
Policy 214: Require, as feasible, that all sanitary sewer lines be installed within dedicated public streets.	The Baylands Specific Plan includes a sewer facilities master plan that provides for the installation of new sanitary sewer lines within dedicated public streets.	No The 2025 Specific Plan project is consistent with this provision.
Policy 221: If new development occurs, require storm drain systems to be installed to City standards. *Program 221a:* In conjunction with land use development applications for vacant lands, require studies to determine design requirements to collect and remove stormwater from the property or reuse stormwater to benefit the public. Require facilities to be designed and installed to City standards, at developer's expense.	The Baylands Specific Plan includes a storm drain master plan consistent with City standards. Infrastructure improvements required for Baylands development will be paid for by the project. No city funds would be expended for construction of Baylands infrastructure.	No The 2025 Specific Plan project is consistent with this provision.
Policy 222: Require that all storm drain lines be installed within dedicated public streets.	The Baylands Specific Plan includes a storm drain master plan that provides for the installation of new sanitary sewer lines within dedicated public streets.	No The 2025 Specific Plan project is consistent with this provision.
Policy 224: In conjunction with development applications that place substantial increased demands upon the existing system, require that the system be upgraded or replaced to the satisfaction of the City. Contributions from responsible parties should be proportional to the impact of their projects.	The Baylands Specific Plan includes a storm drain master plan that provides for the installation of new sanitary sewer lines within dedicated public streets. Infrastructure improvements required for Baylands development will be paid for the project or through federal or state grant funding. No city funds would be expended for construction of Baylands infrastructure.	No The 2025 Specific Plan project is consistent with this provision.

General Plan Policies and Programs	Specific Plan Consistency with General Plan Policy/Program	Would a Significant Physical Environmental Effect Result from an Inconsistency with this provision?
Chapter XI, Housing 2023–2031		
The Brisbane Housing Element sets a quantified objective of 225 very low-income, 287 moderate income, and 1,288 above moderate-income units being developed within the Baylands before the end of 2031. 2.A.1: Maintain existing residential and mixed-use zoning to provide adequate sites to accommodate the 2022-2031 Regional Housing Needs Allocation.	As discussed in Draft EIR Section 4.4, *Socioeconomic Effects*, the Brisbane Specific Plan supports achievement of objectives for the provision of housing for all economic segments of the community. As discussed in Draft EIR Section 4.4, the Specific Plan provides sufficient land at appropriate densities to facilitate meeting Brisbane's 2022–2031 Regional Housing Needs Allocation.	No The 2025 Specific Plan project is consistent with this provision.
2.A.2: Adopt the Baylands Specific Plan/Zoning to allow for 1,800 to 2,200 housing units, at site densities of at least 20 units per acre, on sites accommodating at least 16 units, to meet the 2023-2031 RHNA, consistent with Government Code Section 65583.2(h).	The Specific Plan as currently proposed and analyzed in this EIR provides for development of 1,800 to 2,200 housing units with a minimum density exceeding 20 units per acre on sites that would each accommodate a minimum of 16 units.	No The 2025 Specific Plan project is consistent with this provision.
2.B.1: Through development of the Baylands Specific Plan and implementing development agreements, identify suitable sites for housing for seniors, persons with disabilities or other special needs, and lower-income households in the Baylands subarea.	The Specific Plan provides for development of 2,200 housing units with a variety of densities and building types but does not make any specific commitment to providing housing for seniors, persons with disabilities or other special needs, and lower-income households.	No The 2025 Specific Plan project is consistent with this provision.
6.A.4: Consistent with the City's Green Infrastructure Plan and Section C.3 of the Municipal Regional Stormwater Permit (MRP), require new residential development to retain and treat stormwater from the site and adjacent rights-of-way.	The Specific Plan provides for new development within the Baylands to retain and treat stormwater from the site and adjacent rights-of-way.	No The 2025 Specific Plan project is consistent with this provision.

General Plan Policies and Programs	Specific Plan Consistency with General Plan Policy/Program	Would a Significant Physical Environmental Effect Result from an Inconsistency with this provision?
Chapter XII, Policies and Programs by Subarea		
(ii) a specific schedule establishing the time frames by which (i) the landfill must be closed in full compliance with Title 27 and (ii) the remediation of OU-1 and OU-2 must be completed; and	The Specific Plan provides for phased closure of the former landfill in compliance with Title 27 over a 10-year period. The Specific Plan also requires that remediation of OU-SM (formerly OU-1) and OU-2 be completed concurrent with site grading. The applicant estimates site remediation and grading will occur over a 2-year period.	No The 2025 Specific Plan project is consistent with this provision.
(iii) specific means by which the City may enforce the applicant's adherence to the schedule for closure and remediation and specific consequences, e.g., monetary penalties, suspension of building permits, etc., that the City may impose on the applicant for failing to adhere to the schedule.	The Specific Plan's phasing program requires completion of remediation and site grading prior to development. No site plans or building permits would be approved for lands within OU-SM or OU-2 for which site remediation has not been completed. No site plans or building permits would be approved for lands within the former landfill within areas for which Title 27 landfill closure has not been completed.	
B. A reliable water supply approved by the City of Brisbane to support proposed uses within the Baylands shall be secured prior to site development.	An evaluation of the proposed water supply from the Baylands is provided in Draft EIR Section 4.16, *Utilities, Service Systems, and Water Supply*, which concluded that a reliable water supply for the Baylands would be available. Impacts associated with construction and operation of potable and recycled water supplies are provided in Draft EIR Section 4.16.	No The 2025 Specific Plan project is consistent with this provision.
C. All residential development shall be designed and remediated to accommodate ground level residential uses and ground level residential-supportive uses such as daycare, parks, schools, playgrounds, and medical facilities.	The remedial action plans approved for OU-SM and OU-2 require residential areas within the Baylands to be remediated to accommodate ground level residential uses and ground level residential-supportive uses such as daycare, parks, schools, playgrounds, and medical facilities.	No The 2025 Specific Plan project is consistent with this provision.
D. Each increment of development shall be provided with appropriate transportation related and other infrastructure, facilities, and site amenities as determined by the City. Such transportation related and other infrastructure, facilities, and site amenities (e.g., parks, open space preservation, habitat enhancement) shall be provided at the developer's cost.	The phasing program provided in the Baylands Specific Plan provides for each increment of development to be provided with appropriate transportation related and other infrastructure, facilities, and site amenities as determined by the city. Infrastructure, site amenities, and other improvements required for Baylands development will be paid for the project or through federal or state grant funding. No city funds would be expended for construction of Baylands infrastructure.	No The 2025 Specific Plan project is consistent with this provision.

General Plan Policies and Programs	Specific Plan Consistency with General Plan Policy/Program	Would a Significant Physical Environmental Effect Result from an Inconsistency with this provision?
G. The required specific plan for the Baylands shall include a sustainability program for new development consistent with the principles of the Sustainability Framework for the Brisbane Baylands, Final Report accepted by the City Council on November 5, 2015. Baylands development shall be designed so as to be energy neutral on an ongoing basis.	The Specific Plan proposes substantial on-site electricity generation, including solar-powered infrastructure systems totaling 59.8 MW of capacity and 92,445 MWh of annual generation. Although the Specific Plan would not achieve energy neutrality and generate sufficient on-site renewable energy to offset electrical usage on an annualized basis, renewable energy generation within the Specific Plan area would meet slightly more than half (53.3 percent) of the development's demand for electricity. The remainder of the site's energy would be provided by Peninsula Clean Energy. Peninsula Clean Energy provides 100 percent renewable energy available. While approximately 2.5 percent of individuals under Peninsula Clean Energy opt out of this program (EQ Research 2019), that remaining electrical demand will ultimately become 100 percent renewable (Pub. Utilities Code Sections 399.11, 399.30 and 454.33). Furthermore, the Specific Plan proposes 30 MW of battery-based stationary energy storage systems installed as part of site-specific development projects along with a 250 MW front-of-the-meter, utility-scale battery storage facility. Because the Specific Plan would generate substantial renewable energy on-site along with substantial battery storage, denial of the project and development of 2,200 dwelling units, 6.5 million s.f. of commercial, and 500,000 s.f. of hotel use at alternative locations would increase regional energy consumption (Government Code Section 65589.5(a). Despite the inconsistency with this particular policy, the 2025 Specific Plan project would therefore remain consistent with the overall General Plan.	No Although the 2025 Specific Plan project is inconsistent with this provision, energy would not be used in a wasteful manner, use of renewable energy sources for on-site use would be maximized, and the project would be consistent with the overall General Plan.
The ten Sustainability Framework principles for Baylands development include:		
• **Zero Carbon Buildings**. Making buildings more energy efficient and delivering all energy with renewable technologies.	The Specific Plan contains a program to ensure energy efficiency and requires that all electrical energy used within the Baylands be from renewable sources, whether that energy is generated and stored on-site or purchased from a utility company.	No The 2025 Specific Plan project is consistent with this principle.
• **Zero Waste.** Reducing waste, reusing where possible, and ultimately sending zero waste to landfills.	Recology provides solid waste collection, recycling, and disposal services for residential and commercial customers in San Francisco and the Baylands through a three-cart collection program that requires, under San Francisco's Mandatory Recycling and Composting Ordinance, customers to sort solid waste into recyclables; compostable items, such as food scraps and yard trimmings; and garbage. Baylands development would exceed the requirements of state law and provide more extensive diversion programs than is currently available throughout the rest of Brisbane. The project would therefore not obstruct attainment of a zero waste goal.	No The 2025 Specific Plan project is consistent with this principle.

General Plan Policies and Programs	Specific Plan Consistency with General Plan Policy/Program	Would a Significant Physical Environmental Effect Result from an Inconsistency with this provision?
• **Sustainable Transportation.** Using low carbon modes of transport to reduce emissions and reducing the need to travel with good planning.	The Specific Plan provides for development of comprehensive bicycle and pedestrian systems within the Baylands along with establishment of a Baylands shuttle system and provision of EV charging stations. Draft EIR Section 4.8, *Transportation*, evaluates the vehicle miles traveled impacts of proposed Baylands development. In addition, Draft EIR Section 4.11, *Energy Resources*, analyzes the extent to which Baylands development would encourage electric vehicle use.	No The 2025 Specific Plan project is consistent with this principle.
• **Local and Sustainable Materials.** Using sustainable healthy products, with low embodied energy, sourced locally, made from renewable or waste resources.	The Local and Sustainable Materials principle is not reflected in any of the thresholds and impacts analyzed in this EIR. Consistency with this principle is therefore a planning issue rather than a physical environmental effect analyzed pursuant to CEQA.	No The 2025 Specific Plan project is consistent with this principle.
• **Local and Sustainable Food.** Choosing low impact, local, seasonal and organic diets and reducing food waste.	The Local and Sustainable Food principle is not reflected in any of the thresholds and impacts analyzed in this EIR. Consistency with this principle is therefore a planning issue rather than a physical environmental effect analyzed pursuant to CEQA.	No The 2025 Specific Plan project is consistent with this principle.
• **Sustainable Water.** Using water more efficiently in buildings and in the products people buy, and addressing local flooding, wetland and stormwater pollution.	Baylands development provides for extensive water recycling. In addition to CALGreen Tier 1 water conservation standards, the Specific Plan prohibits potable water from being used for irrigation throughout the site or for domestic flush features within non-residential buildings. Standards for low water use landscaping are also included in the Specific Plan.	No The 2025 Specific Plan project is consistent with this principle.
• **Open Space and Habitat.** Protecting and restoring biodiversity and natural habitats through appropriate land use and integration into the built environment.	The Specific Plan proposes a 157-acre open space system, which provides for habitat restoration, enhancement, and protection on Icehouse Hill, within Visitacion Creek, and along the north shore of the Brisbane lagoon, as well as within adjacent areas. The proposed Baylands Park and the Ecological Park integrate habitat restoration and enhancement into the community's built environment.	No The 2025 Specific Plan project is consistent with this principle.
• **Culture and Heritage.** Reviving local identity and wisdom; supporting and participating in the arts.	The Specific Plan includes restoration and reuse of the historic Roundhouse. The Specific Plan also proposes contributing to the provision of public art within the Baylands at a rate half of that currently required of development outside of the Baylands. In addition to use of public art fees for traditional public art installations, the Specific Plan permits public art fees to be used for project wayfinding and signage, as well as for rehabilitation of the historic Roundhouse. While the proposed reduced contribution to art in public places would be inconsistent with this sustainability principle, it would not constitute a physical environmental impact for CEQA purposes as to restoration of the Roundhouse.	No The 2025 Specific Plan project is consistent with this principle.

General Plan Policies and Programs	Specific Plan Consistency with General Plan Policy/Program	Would a Significant Physical Environmental Effect Result from an Inconsistency with this provision?
• **Economic Vitality with Equity and Ecology.** Creating ecologically based economies that support equity and inclusive communities.	The Specific Plan calls for a "mix of housing types to serve diverse income levels and family types, including multifamily high, multifamily mid, multifamily low, townhomes, and duplex/single family homes." Analysis of the extent to which proposed Baylands residential development would address identified housing needs for all economic segments of the community as well as identified special needs groups is provided in Draft EIR Section 4.4, *Socioeconomic Effects*, which concludes that the Specific Plan provides a sufficient range of residential development intensities and building types to provide housing for all economic segments of the community. The Specific Plan does not, however, make a specific commitment to the amount of housing affordable to lower-income households or to providing housing for seniors, persons with disabilities, or other special needs. Site-specific development projects would be subject to Municipal Code inclusionary housing requirements.	No The 2025 Specific Plan project is consistent with this principle.
• **Health, Safety and Happiness.** Encouraging active, safe, meaningful lives to promote good health and well-being.	While the Specific Plan proposes a 157-acre open space system, large portions of that system are designed for habitat restoration and enhancement as well as for resource conservation. Draft EIR Section 4.18, *Parks, Open Space/Open Areas, and Recreational Resources*, evaluates the extent to which the Specific Plan achieves the General Plan's aspirational goals for provision of recreational lands. This evaluation concludes that the 64.8 acres of parkland proposed by the Specific Plan (13.2 acres per 1,000 Baylands residents) exceeds the 5.05 acres per 1,000 population of parkland currently available to Brisbane residents but falls short of the 18.5 acres to 1,000 population aspirational goal set in the General Plan for local and community parks. Because the Specific Plan would provide more than twice the park land per 1,000 population currently available to Brisbane residents, Draft EIR Section 4.18 determined the Specific Plan would not result in significant impacts to the City's existing park system.	No The 2025 Specific Plan project is consistent with this principle.
H. Key habitat areas, including Icehouse Hill and Brisbane Lagoon and adjacent habitat as identified in the 2001 City Open Space Master Plan shall be preserved, enhanced, and protected.	Key habitat areas, including Icehouse Hill, Brisbane Lagoon, and adjacent habitat, and Visitacion Creek are proposed to be enhanced and preserved in open space. The Specific Plan includes programs for habitat creation and enhancement. See Draft EIR Section 4.6, *Biological Resources*, for evaluation of biological resources impacts.	No The 2025 Specific Plan project is consistent with this provision.

General Plan Policies and Programs	Specific Plan Consistency with General Plan Policy/Program	Would a Significant Physical Environmental Effect Result from an Inconsistency with this provision?
I. The historic Roundhouse shall be protected and preserved. The required specific plan shall ensure rehabilitation of the Roundhouse for adaptive reuse at the developer's cost.	The Specific Plan includes provisions for restoration of the Roundhouse consistent with Secretary of the Interior standards, along with adaptive reuse of the structure. The Specific Plan also notes that Roundhouse restoration may be at least partially paid for with public art fees that the Specific Plan proposes at half the rate charged to other developments within the city for provision of art in public places. Thus, while a less than significant physical environmental impact would result, the Specific Plan would be inconsistent with the sustainability principle in relation to financing of improvements.	No The 2025 Specific Plan project is consistent with this provision.
J. Development shall be designed to protect uses from the 100-year flood, including 100 years of projected sea level rise as determined based on regulatory standards or guidelines in effect at the time of project construction, with the reference to guidelines and sea level rise projections approved by the Director of Public Works/City Engineer based on context-specific considerations of risk tolerance and adaptive capacity.	The Baylands Specific Plan establishes flood protection criteria consistent with the City's current standards established for the Baylands in the Brisbane Baylands Program EIR. Future site-specific development will be required to meet the standards and guidelines in effect at the time of project construction, with the reference to guidelines and sea level rise projections approved by the Director of Public Works/City Engineer.	No The 2025 Specific Plan project is consistent with this provision.
K. Prior to the issuance of a grading permit to export soil or move soil from the existing landfill area for incorporation in a remediation or grading plan, the soil shall be tested in a manner approved by the City.	As discussed in Draft EIR Section 4.13, *Hazards and Hazardous Materials*, all soil to be moved within and from the landfill site will be tested in a manner approved by the city. Grading permits will be issued only for the movement of soils deemed safe.	No The 2025 Specific Plan project is consistent with this provision.
Policy BL.3: Address visual impacts of any future specific plan development in the following manner:		
Program BL.3.a: Environmental review for the required Specific Plan shall include a visual impact analysis which shall include an evaluation of the impacts of building heights, including the impact of the proposal on view corridors.	A visual impact analysis is provided in Draft EIR Section 4.5, *Aesthetics and Visual Resources*, which concludes views of San Bruno Mountain, and the San Francisco Bay would be partially obscured from public vantage points.	No The 2025 Specific Plan project is consistent with this provision.
Program BL.3.b: The required Specific Plan shall address the heights of buildings and building groups to achieve the following: i. diversity of height within the subarea; ii. creative excellence in architectural and site design;	The Baylands Specific Plan includes building height standards and design guidelines that provide for a diversity of building types, heights, and architectural design. The Specific Plan also sets standards for building separation and preserves substantial portions of the site in open space.	No The 2025 Specific Plan project is consistent with this provision.

General Plan Policies and Programs	Specific Plan Consistency with General Plan Policy/Program	Would a Significant Physical Environmental Effect Result from an Inconsistency with this provision?
iii. visual acceptability when seen from above; iv. a complementary relationship to the overall topography, especially the Lagoon, San Bruno Mountain and the Bay, and the entrance to Central Brisbane; v. open space and open areas. Development south of the Bayshore Basin drainage channel shall maintain a low profile permitting low or mid-rise buildings, not to exceed 6 stories in height, in order to preserve the existing views of San Francisco and San Francisco Bay as seen from Central Brisbane, and to maximize the amount of landscape and open space or open area in this portion of the subarea. The following design approaches shall not be included in the required specific plan or any development proposal: i. Buildings or building groups that block view corridors to the Bay or appear as “fortresses" or "walls" lining the Bayfront, the Lagoon or any arterial street.		
Policy BL.4: Maximize opportunities for open space and recreational uses in any land use planning for this subarea.	The Specific Plan proposed up to 157 acres of open space within the Baylands, encompassing 29.3 percent of the Baylands Year 2100 land area. A total of 64.4 acres of parks and recreational uses will also be provided within the Baylands.	No The 2025 Specific Plan project is consistent with this provision.
Policy BL.6: Establish a safety buffer around and provide for visual screening of the Tank Farm.	The Baylands Specific Plan provides for separation of new development from the tank farm.	No The 2025 Specific Plan project is consistent with this provision.
Policy BL.7: Give aesthetic consideration to views of San Bruno Mountain, the Bay and the Baylands development itself from Central Brisbane as well as views from the Baylands in the design of any development.	Visual simulations of Baylands development were prepared and are presented in Draft EIR Section 4.5, *Aesthetics and Visual Resources*, which concludes that views of the San Bruno Mountain and the San Francisco Bay would be partially obscured from public vantage points.	No The 2025 Specific Plan project is consistent with this provision.

General Plan Policies and Programs	Specific Plan Consistency with General Plan Policy/Program	Would a Significant Physical Environmental Effect Result from an Inconsistency with this provision?
Policy BL.10: Develop design guidelines as a part of the Specific Plan for the Baylands. In the design guidelines, incorporate standards for roofs, emphasizing color, materials and screening, so as to consider views from above.	The Baylands Specific Plan includes design guidelines addressing roof design, use of color, materials, and screening, which together provide consideration of views of the Baylands from higher elevations in the Brisbane community above.	No The 2025 Specific Plan project is consistent with this provision.
Policy BL.12: Develop a pedestrian and bicycle system to reach all areas of the City from the Baylands.	The Specific Plan provides comprehensive bicycle and pedestrian systems for mobility within the Baylands, including connectivity with bicycle and pedestrian facilities within Brisbane west of Bayshore Boulevard. Analysis of the Specific Plan's pedestrian and bicycle system identified several gaps in connectivity between the Baylands and adjacent lands. Section 4.8, *Transportation*, includes mitigation measures to ensure connectivity.	No The 2025 Specific Plan project is consistent with this provision.
Policy BL.13: Connect all development within the Baylands with bicycle and pedestrian networks.	The Specific Plan provides comprehensive bicycle and pedestrian systems for mobility within the Baylands, including connectivity with bicycle and pedestrian facilities within Brisbane west of Bayshore Boulevard. Analysis of the Specific Plan's pedestrian and bicycle system identified several gaps in connectivity between the Baylands and adjacent lands. Section 4.8, *Transportation*, includes mitigation measures to ensure connectivity.	No The 2025 Specific Plan project is consistent with this provision.
Policy BL.14: Work with other agencies to promote interconnection with regional bicycle systems.	The Specific Plan provides comprehensive bicycle and pedestrian systems for mobility within the Baylands, including connectivity with bicycle and pedestrian facilities within Brisbane west of Bayshore Boulevard. Analysis of the Specific Plan's pedestrian and bicycle system identified several gaps in connectivity between the Baylands and adjacent lands. Section 4.8, *Transportation*, includes mitigation measures to ensure connectivity.	No The 2025 Specific Plan project is consistent with this provision.
Policy BL.15: Cooperate with other agencies to develop the Bay Trail between Sierra Point and the Candlestick Recreation Area.	The Specific Plan includes extension of the Bay Trail through the Baylands.	No The 2025 Specific Plan project is consistent with this provision.
Policy BL.16: Enhance the natural landform and biotic values of Icehouse Hill and preserve its ability to visually screen the Tank Farm.	The Specific Plan includes preservation of Icehouse Hill as open space with limited recreational use in appropriate locations.	No The 2025 Specific Plan project is consistent with this provision.
Policy BL.18: Develop a public pathway and access facilities immediately adjacent to the Lagoon.	Lagoon Park, which is proposed along the north shore of the lagoon includes publicly accessible trails for bicycle and pedestrian use.	No The 2025 Specific Plan project is consistent with this provision.

General Plan Policies and Programs	Specific Plan Consistency with General Plan Policy/Program	Would a Significant Physical Environmental Effect Result from an Inconsistency with this provision?
Policy BL.19: Establish a buffer zone between the Lagoon and adjacent uses.	The Specific Plan provides for separation of the lagoon and adjacent habitat from commercial office and other incompatible uses.	No The 2025 Specific Plan project is consistent with this provision.
Policy BL.20: Dedicate land area for open space, recreational uses and wetlands restoration, especially around the Lagoon.	The Specific Plan would establish Lagoon Park along the north shore of the lagoon for habitat restoration and compatible recreation use.	No The 2025 Specific Plan project is consistent with this provision.
Policy BL.24: Seek opportunities to enhance and restore wetlands in consultation with responsible agencies.	The Specific Plan provides for creation, restoration, and enhancement of habitat areas on Icehouse Hill, within Visitacion Creek, and along the north shore of the lagoon. Coordination with the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife will occur as part of Draft EIR review, comment, and response process.	No The 2025 Specific Plan project is consistent with this provision.
Policy BL.25: Require water-conserving landscape plans, including suitable plant materials and irrigation systems, and provide for the use of non-potable water.	The Specific Plan's sustainability framework includes water conservation programs, including provision of a recycled water plant and drought tolerant landscaping.	No The 2025 Specific Plan project is consistent with this provision.
Policy BL.27: Improve water circulation and water quality in the Lagoon by control of sedimentation and by careful monitoring and maintenance of underground pipelines by responsible agencies.	Draft EIR Section 4.14, *Hydrology and Water Quality*, examines impacts of Baylands development on water quality within the lagoon and establishes specific methods for the protection of the lagoon's water quality.	No The 2025 Specific Plan project is consistent with this provision.
Policy BL.28: Meet applicable seismic requirements in all construction, with special attention to non-engineered fill.	Site grading and building construction within the Baylands will be required to meet applicable requirements in place at the time of grading permit and building permit issuance, respectively.	No The 2025 Specific Plan project is consistent with this provision.
Policy BL.29: Disclose, in a risk analysis, all hazardous materials to be utilized in research and development and biotechnical research, the assumptions that were used, and methods of safe handling and disposal.	This requirement will be placed on permits for specific research and development and biotechnical uses within the Baylands as they are proposed over time.	No The 2025 Specific Plan project is consistent with this provision.
Policy BL.30: Utilize landscape and construction techniques to reduce noise impacts.	Draft EIR Section 4.12, *Noise and Vibration*, describes methods proposed to reduce noise impacts within the Baylands.	No The 2025 Specific Plan project is consistent with this provision.
Policy BL.31: Require improvement of drainage and correction of hillside erosion and flooding on Bayshore Boulevard.	Grading and site-specific development within the Baylands will be required to implement best management practices for erosion control.	No The 2025 Specific Plan project is consistent with this provision.

Table 4.3-2: Consistency of the Baylands Specific Plan with Applicable Regional Plans and Policies

Existing Plan and Policies	Consistency of the Baylands Specific Plan
Plan Bay Area 2050	
Address climate change by reducing carbon dioxide emissions pursuant to targets established in consultation with the California Air Resources Board; specifically, meet or exceed a 19 percent reduction in per-capita emissions from cars and light-duty trucks by 2035 relative to 2005 levels.	**Consistent**. Baylands development will be subject to a series of transportation demand measures that will reduce trip generation. As documented in Section 4.8, *Transportation*, the length of home to work trips for Baylands residents and workers will be less than the regional average. In addition, as the result of the Specific Plan's transit orientation, Baylands development would reduce regional vehicle miles traveled within the nine-county San Francisco Bay region.
House 100 percent of the region's projected growth by income level, and with no increase in in-commuters over the baseline conditions.	**Consistent**. The Specific Plan designates an adequate land area at appropriate densities for the development of housing to meet Brisbane's quantified objectives for housing as outlined in the city's 2023-2031 Housing Element.
Support an expanded, well-functioning, safe and multimodal transportation system that connects the Bay Area by improving access to destinations and by ensuring residents and workers have a reliable transportation system.	**Consistent.** A substantial portion of Baylands development will be located within walking distance of the Bayshore Caltrain Station. In addition, the Specific Plan provides for a shuttle system connecting Baylands development and portions of the existing Brisbane community to the Caltrain station. In addition, the Specific Plan includes development of a comprehensive system of bicycle and pedestrian paths.
Spur Housing Production at all Income Levels. Allow a Greater Mix of Housing Densities and Types in Growth Geographies | Allow a variety of housing types at a range of densities to be built in Priority Development Areas. Build Adequate Affordable Housing to Ensure Homes for All | Construction of sufficient deed-restricted affordable homes to meet the needs of low-income households. Integrate Affordable Housing into All Major Housing Projects | Require a baseline of 10–20 percent of new market-rate housing developments of five units or more to be affordable to low-income households.	**Consistent.** The Baylands Specific Plan provides for a range of housing densities and types that would achieve Brisbane's quantified objectives for housing for all economic segments of the population from 2023 through 2031.
Conserve the region's natural resources, open space, clean water, and clean air with the intent of improving health of Bay Area residents and workers and improving the health of the environment locally and globally.	**Consistent**. The evaluations contained in this EIR along with applicable mitigation measures (see Section 4.14, *Hydrology and Water Quality*) confirm that Baylands development would minimize the volume of pollutants entering waterways. Air quality and health risk studies were undertaken for Baylands development and concluded that proposed mitigation measures would avoid significant health. Given the transit-oriented location of the Baylands and the Specific Plan's sustainability programs, the Specific Plan minimizes air pollutant emissions for a project of its size and is consistent with regional air quality planning programs.
Shift the Location of Jobs. Allow Greater Commercial Densities in Growth Geographies | Allow greater densities for new commercial development in select PDAs to encourage more jobs to locate near public transit.	**Consistent.** The Baylands Specific Plan area is designated in *Plan Bay Area 2050* as a Priority Development Area. The Specific Plan provides sufficient housing and employment-generating opportunities to approximately double Brisbane's population and its employment base.

Existing Plan and Policies	Consistency of the Baylands Specific Plan
Create Healthy and Safe Streets. Build a Complete Streets Network Adopt roadway standards consistent with MTC complete streets policy.	**Consistent.** The Baylands Specific Plan provides a comprehensive system of bicycle and pedestrian paths, as well as a shuttle system.
Reduce Risks from Hazards. Adapt to sea level rise	**Consistent.** The Specific Plan provides adaptation to project Year 2100 sea level rise.
Spur Housing Production at All Income Levels. Allow a Greater Mix of Housing Densities and Types in Growth Geographies | Allow a variety of housing types at a range of densities to be built in Priority Development Areas. Build Adequate Affordable Housing to Ensure Homes for All | Construction of sufficient deed-restricted affordable homes to meet the needs of low-income households. Integrate Affordable Housing into All Major Housing Projects | Require a baseline of 10–20 percent of new market-rate housing developments of five units or more to be affordable to low-income households.	**Consistent.** The Baylands Specific Plan provides for a range of housing densities and types that would achieve Brisbane's quantified objectives for housing for all economic segments of the population from 2023 through 2031.
Parking Parking maximums of 1 space per dwelling unit Parking maximums of 2.5 spaces per 1,000 square feet Secure bicycle parking of 1 space per dwelling unit and 1 space per 5,000 square feet Unbundled parking Shared parking between land uses	**Inconsistent.** Multi-Family High and Multi-Family Mid residential categories have maximum parking ratios of 1.0 and 0.75, respectively. Multi-Family Low, Townhome, and Duplex/Single-Family have parking ratios greater than 1.00 (1.25). Although Specific Plan parking maximums per district could limit overall parking to less than 1 space per unit, MTC TOC policy notes the 1.0 space per unit maximum "may be met through creation of a parking district that provides shared vehicle parking for multiple land uses within an area."
Station Access Provide access for pedestrians and bicyclists to transit stations	**Consistent.** Included in the Specific Plan through a network of sidewalks, bicycle facilities, and connections to off-site pathways in adjacent neighborhoods.
Mobility Hubs Implement mobility hubs in locations identified by MTC	**Consistent.** Included in the Specific Plan.

Existing Plan and Policies	Consistency of the Baylands Specific Plan
Metropolitan Transportation Commission Transit-Oriented Communities Policy (Resolution No. 4530)	
Average residential development density for new development within one-half mile of a Caltrain stop. • Minimum density of 25-35 per net acre or more as measured on a block-by block basis. Average commercial office development intensity for new development within one-half mile of a Caltrain stop. • Minimum floor area ratio (FAR) of 2.0-4.0 or more as measured on a block-by block basis. Affordable housing production. • 15 percent of units in new residential development projects to be deed-restricted affordable to low-income households. Ministerial Approval • Grant ministerial approval of residential developments that include 15 percent affordable units for projects. Stabilizing businesses to prevent displacement. • Give priority and a right of first offer to local small businesses and/or community-serving non-profits when selecting tenants for new market-rate commercial space. Parking management. • Residential Development: No minimum parking requirement to be applied with no more than 1.0 space per unit to be permitted as measured on a block-by-block basis. • Commercial Development: No minimum parking requirement to be applied with no more than 2.5 spaces per 1,000 square feet to be permitted as measured on a block-by-block basis. Bicycle parking. • Minimum of one secure bicycle parking space per dwelling unit • Minimum of one secure bicycle parking space per 5,000 occupied square feet of office space. Transit Station Access. • Adopt policies and design guidelines that comply with MTC's Complete Streets Policy (Resolution 4493). • Provide improvements to allow station access via a 10-mintue walk (including for people who use wheelchairs or other mobility aids) and 15-minute bicycle or bus/shuttle trip for uses within one-half mile of the transit station.	**Inconsistent.** The Specific Plan does not contain explicit floor area ratio standards for commercial office uses but establishes a maximum allowable building square footage for each commercial block. Because the Specific Plan does not set a minimum development intensity, it is possible that the average FAR for commercial office use within one-half mile of the Bayshore Caltrain stop would fall below 2.0. Currently, Brisbane requires a minimum of 15 percent of units in new residential developments be deed-restricted affordable to low-income households. Depending on how applicants for site-specific development projects distribute affordable units, less than 15 percent of the units within one-half mile of the Caltrain Bayshore Station might be deed-restricted affordable to low-income households. The Specific Plan sets an overall maximum of 11,000 parking spaces within the Baylands and establishes maximum per unit and per 1,000 square foot ratios. The maximum prescribed parking spaces per district are, on average, in compliance with the Transit Oriented Communities policy; however, the Specific Plan permits Multi-Family Low, Townhome, and duplex/single family housing types to provide 1.25 spaces per unit, exceeding the maximum in MTC Resolution 4530. The Specific Plan does not address business displacement. The Specific Plan establishes a maximum permitted number of dwelling units for each residential block that, on average, exceeds an allowable 35 dwelling units per acre maximum, but does not establish a required minimum density of 25 dwelling units per acre that would be consistent with the Transit Oriented Communities policy for residential density within one-half mile of the Caltrain Bayshore Station. The Specific Plan incorporates design guidelines that comply with MTC's Complete Streets Policy (Resolution 4493). While the Specific Plan provides requirements for bicycle parking, secured parking space requirements (identified in the Specific Plan as "long-term" bicycle parking) fall short of the provisions or Resolution No. 4530 by requiring one secure bicycle parking space per two dwelling units rather than one per unit.
San Francisco Bay Plan	
Fish, Other Aquatic Organisms, and Wildlife Policies	
To assure the benefits of fish, other aquatic organisms and wildlife for future generations, to the greatest extent feasible, the Bay's tidal marshes, tidal flats, and subtidal habitat should be conserved, restored, and increased.	**Consistent.** Baylands development includes restoration of habitat within Visitacion Creek and along the north shore of Brisbane Lagoon.

Existing Plan and Policies	Consistency of the Baylands Specific Plan
Native species, including candidate, threatened, and endangered species; species that the California Department of Fish and Wildlife, the National Marine Fisheries Service, and/or the U.S. Fish and Wildlife Service have listed under the California or Federal Endangered Species Act; and any species that provides substantial public benefits, as well as specific habitats that are needed to conserve, increase, or prevent the extinction of these species, should be protected, whether in the Bay or behind dikes. Protection of fish, other aquatic organisms, and wildlife and their habitats may entail placement of fill to enhance the Bay's ecological function in the near-term and to ensure that they persist into the future with sea level rise.	**Consistent.** Baylands development includes restoration of habitat within Visitacion Creek and along the north shore of Brisbane Lagoon. In addition, habitats on Icehouse Hill would be protected, enhanced, and expanded to increase the amount and quality of host plants for sensitive butterfly species.
The Commission should: • Not authorize projects that would result in the "taking" of any plant, fish, other aquatic organism or wildlife species listed as endangered or threatened pursuant to the state or federal Endangered Species Acts, or the federal Marine Mammal Protection Act, or species that are candidates for listing under these acts, unless the project applicant has obtained the appropriate "take" authorization from the U.S. Fish and Wildlife Service, National Marine Fisheries Service, or the California Department of Fish and Wildlife; and • Give appropriate consideration to the recommendations of the California Department of Fish and Wildlife, the National Marine Fisheries Service, or the U.S. Fish and Wildlife Service in order to avoid possible adverse effects of a proposed project on fish, other aquatic organisms, and wildlife habitat.	**Consistent.** Baylands development includes restoration of habitat within Visitacion Creek and along the north shore of Brisbane Lagoon.
Sediment placement for habitat adaptation should be prioritized in (1) subsided diked baylands, tidal marshes, and tidal flats, as these areas are particularly vulnerable to loss and degradation due to sea level rise and lack of necessary sediment supply, and/or in (2) intertidal and shallow subtidal areas to support tidal marsh, tidal flat, and eelgrass bed adaptation. In some cases, sediment placement for a habitat project in deep subtidal areas may be authorized if substantial ecological benefits will be provided and the project aligns with current regional sediment availability and needs.	**Consistent.** Proposed restoration of habitat within Visitacion Creek and along the north shore of Brisbane Lagoon has been designed to adapt to projected sea level rise.
Water Quality	
Bay water pollution should be prevented to the greatest extent feasible. The Bay's tidal marshes, tidal flats, and water surface area and volume should be conserved and, whenever possible, restored and increased to protect and improve water quality. Fresh water inflow into the Bay should be maintained at a level adequate to protect Bay resources and beneficial uses.	**Consistent.** Implementation of best management practices for site grading, development, and habitat restoration will be required to prevent sedimentation and transportation of pollution to the Bay and Lagoon.

Existing Plan and Policies	Consistency of the Baylands Specific Plan
Water quality in all parts of the Bay should be maintained at a level that will support and promote the beneficial uses of the Bay as identified in the San Francisco Bay Regional Water Quality Control Board's Water Quality Control Plan, San Francisco Bay Basin and should be protected from all harmful or potentially harmful pollutants. The policies, recommendations, decisions, advice and authority of the State Water Resources Control Board and the Regional Board should be the basis for carrying out the Commission's water quality responsibilities.	**Consistent.** Implementation of best management practices for site grading, development, and habitat restoration will be required to prevent sedimentation and transportation of pollution to the Bay and Lagoon.
New projects should be sited, designed, constructed and maintained to prevent or, if prevention is infeasible, to minimize the discharge of pollutants into the Bay by: (a) controlling pollutant sources at the project site; (b) using construction materials that contain nonpolluting materials; and (c) applying appropriate, accepted, and effective best management practices, especially where water dispersion is poor and near shellfish beds and other significant biotic resources.	**Consistent.** Implementation of best management practices for site grading, development, and habitat restoration will be required to prevent sedimentation and transportation of pollution to the Bay and Lagoon.
To protect the Bay and its tributaries from the water quality impacts of nonpoint source pollution, new development should be sited and designed consistent with standards in municipal stormwater permits and state and regional stormwater management guidelines, where applicable, and with the protection of Bay resources. To offset impacts from increased impervious areas and land disturbances, vegetated swales, permeable pavement materials, preservation of existing trees and vegetation, planting native vegetation, and other appropriate measures should be evaluated and implemented where appropriate.	**Consistent.** Implementation of best management practices for site grading, development, and habitat restoration will be required to prevent sedimentation and transportation of pollution to the Bay and Lagoon.
Whenever practicable, native vegetation buffer areas should be provided as part of a project to control pollutants from entering the Bay, and vegetation should be substituted for rock riprap, concrete, or other hard surface shoreline and bank erosion control methods where appropriate and practicable.	**Consistent.** The Specific Plan provides for naturalized drainage courses and wetland habitat areas to prevent pollutants from entering the Bay or Lagoon. In addition, the Specific Plan provides for establishing vegetative habitat along the north shore of the lagoon where rip rap is now present.
Water Surface Area and Volume	
The surface area of the Bay and the total volume of water should be kept as large as possible in order to maximize active oxygen interchange, vigorous circulation, and effective tidal action. Filling and diking that reduce surface area and water volume should therefore be allowed only for purposes providing substantial public benefits and only if there is no reasonable alternative.	**Consistent.** The Specific Plan maximizes the surface water area of the Lagoon by providing for its expansion as the result of sea level rise. The Specific Plan also provides for tidal action within Visitacion Creek to cover a larger area from sea level rise.
Water circulation in the Bay should be maintained and improved as much as possible. Any proposed fills, dikes, or piers should be thoroughly evaluated to determine their effects upon water circulation and then modified as necessary to improve circulation or at least to minimize any harmful effects.	**Consistent.** No fills, dikes, or piers are proposed within the Bay or Lagoon other than establishing vegetative habitat along the north shore of the lagoon where rip rap is now present.

Existing Plan and Policies	Consistency of the Baylands Specific Plan
Tidal Marshes and Tidal Flats	
Tidal marshes and tidal flats should be conserved to the fullest possible extent. Filling, diking, and dredging projects that would substantially harm tidal marshes or tidal flats should be allowed only for purposes that provide substantial public benefits and only if there is no feasible alternative.	**Consistent.** Baylands development includes restoration of habitat within Visitacion Creek and along the north shore of Brisbane Lagoon.
Any proposed fill, diking, or dredging project should be thoroughly evaluated to determine the effect of the project on tidal marshes and tidal flats, and designed to minimize, and if feasible, avoid any harmful effects.	**Consistent.** Impacts associated with restoration of habitat within Visitacion Creek and along the north shore of Brisbane Lagoon provided in Section 4.6, *Biological Resources*, concludes that the Specific Plan, including the mitigation measures outlined in that section, would have a positive effect on tidally influenced areas within Visitacion Creek and the Lagoon.
Projects should be sited and designed to avoid, or if avoidance is infeasible, minimize adverse impacts on any transition zone present between tidal and upland habitats. Where a transition zone does not exist and it is feasible and ecologically appropriate, shoreline projects should be designed to provide a transition zone between tidal and upland habitats.	**Consistent.** Impacts associated with restoration of habitat within Visitacion Creek and along the north shore of Brisbane Lagoon include the establishment of transition areas to adapt to sea level rise over time. The analysis provided in Section 4.6, *Biological Resources*, concludes that the Specific Plan, including the mitigation measures outlined in that section, would have a positive effect on tidally influenced areas within Visitacion Creek and the Lagoon.
Any habitat project should include clear and specific long-term and short-term biological and physical goals, success criteria, a monitoring program, and as appropriate, an adaptive management plan. Design and evaluation of the project should include an analysis of (a) how the project's adaptive capacity can be enhanced so that it is resilient to sea level rise and climate change; (b) the impact of the project on the Bay's and local embayment's sediment transport and budget; (c) localized sediment erosion and accretion; (d) the role of tidal flows; (e) potential invasive species introduction, spread, and their control; (f) rates of colonization by vegetation; (g) the expected use of the site by fish, other aquatic organisms, and wildlife; (h) an appropriate buffer, where feasible, between shoreline development and habitats to protect wildlife and provide space for marsh migration as sea level rises; (i) site characterization; (j) how the project adheres to regional restoration goals; (k) whether the project would be sustained by natural processes; and (l) how the project restores, enhances, or creates connectivity across Bay habitats at a local, sub-regional, and/or regional scale.	**Consistent.** EIR mitigation measures require habitat restoration improvements proposed for Visitacion Creek and the north shore of the Lagoon to adhere to specific long-term and short-term biological and physical objectives and success criteria, adaptive management requirements, and maintain a monitoring program.
If a habitat project's success criteria have not been met, benefits and impacts should be analyzed to determine whether appropriate adaptive measures should be implemented. If substantial adverse impacts to the Bay and/or native or commercially important species have occurred, the project should be further modified to reduce its impacts.	**Consistent.** The monitoring program for habitat restoration within Visitacion Creek and along the north shore of the Lagoon will require implementation of appropriate measures should monitoring determine that restoration success criteria are not being met.

Existing Plan and Policies	Consistency of the Baylands Specific Plan
The level of design; amount, duration, and extent of monitoring; and complexity of the adaptive management plan required for a habitat project should be consistent with the purpose, size, impact, level of uncertainty, and/or expected lifespan of the project. Habitat projects should have a funding strategy for monitoring and adaptive management of the project, commensurate with the level of monitoring and adaptive management that is required for the project, to demonstrate that the applicant has considered costs and identified potential funding sources for any necessary monitoring and management.	**Consistent.** Initial restoration of habitat within Visitacion Creek and along the north shore of the Lagoon will be financed by the project developer. The monitoring program for habitat restoration will be consistent with the purpose, size, impact, level of uncertainty, and/or expected lifespan of the restoration effort. The monitoring plan will be required to identify fundings source(s) for monitoring and any remedial measures that may be required.
Based on scientific ecological analysis, project need, and consultation with the relevant federal and state resource agencies, fill may be authorized for habitat enhancement, restoration, or sea level rise adaptation of habitat.	**Consistent.** No fills, dikes, or piers are proposed within the Bay or Lagoon other than establishing vegetative habitat along the north shore of the lagoon where rip rap is now present.
Climate Change	
When planning shoreline areas or designing larger shoreline projects, a risk assessment should be prepared by a qualified engineer and should be based on the estimated 100-year flood elevation that takes into account the best estimates of future sea level rise and current flood protection and planned flood protection that will be funded and constructed when needed to provide protection for the proposed project or shoreline area. A range of sea level rise projections for mid-century and end of century based on the best scientific data available should be used in the risk assessment. Inundation maps used for the risk assessment should be prepared under the direction of a qualified engineer. The risk assessment should identify all types of potential flooding, degrees of uncertainty, consequences of defense failure, and risks to existing habitat from proposed flood protection devices.	**Consistent.** As part of the analyses undertaken for this EIR, a "Sea-Level Rise Technical Report" (EIR Appendix L) has been prepared. The SLR Technical Report considers existing flood hazards from coastal, stormwater, and groundwater sources and how these hazards will change with sea level rise through the Year 2100. The Sea Level Rise Technical Report also provides mapping of future habitats and open space as sea levels rise. The report found the Specific Plan to be generally consistent with sea level rise planning guidance and, because the Specific Plan raises much of the ground surface, to be resilient to even the upper range of sea level rise projected for 2100. Certain areas of the site were, however, determined to be vulnerable to sea levels as documented in Appendix L and Draft EIR Section 4.14, *Hydrology and Water Quality*, which includes mitigation measures addressing these areas of vulnerability.
To protect public safety and ecosystem services, within areas that a risk assessment determines are vulnerable to future shoreline flooding that threatens public safety, all projects—other than repairs of existing facilities, small projects that do not increase risks to public safety, interim projects and infill projects within existing urbanized areas—should be designed to be resilient to a mid-century sea level rise projection. If it is likely the project will remain in place longer than mid-century, an adaptive management plan should be developed to address the long-term impacts that will arise based on a risk assessment using the best available science-based projection for sea level rise at the end of the century.	**Consistent.** Baylands habitat conservation, recreational, and development areas have been designed in accordance with the most recent State guidance using the best available science-based projection for sea level rise at the end of the century. Thus, residential, commercial, and other Baylands buildings are located so as not to be subject to sea level rise of 83 inches through the Year 2100. Recreational and other open space/open areas were designed so as not to be subject to 41 inches of sea level rise through the Year 2100. Biological resources analysis was also conducted to ensure that lands required for mitigation of impacts to wetlands and non-wetland waters would be resilient such that the required acreage of mitigation land would be available within the Baylands following anticipated sea level rise through the end of the century.
To address the regional adverse impacts of climate change, undeveloped areas that are both vulnerable to future flooding and currently sustain significant habitats or species, or possess conditions that make the areas especially suitable for ecosystem enhancement, should be given special consideration for preservation and habitat enhancement and should be encouraged to be used for those purposes.	**Consistent.** Baylands habitat conservation, recreational, and development areas have been designed in accordance with the most recent State guidance using the best available science-based projection for sea level rise at the end of the century.

Existing Plan and Policies	Consistency of the Baylands Specific Plan
Wherever feasible and appropriate, effective, innovative sea level rise adaptation approaches should be encouraged.	**Consistent.** Biological resources analysis was also conducted to ensure that lands required for mitigation of impacts to wetlands and non-wetland waters would be resilient such that the required acreage of mitigation land would be available within the Baylands following anticipated sea level rise through the end of the century.
Until a regional sea level rise adaptation strategy can be completed, the Commission should evaluate each project proposed in vulnerable areas on a case-by-case basis to determine the project's public benefits, resilience to flooding, and capacity to adapt to climate change impacts. The following specific types of projects have regional benefits, advance regional goals, and should be encouraged, if their regional benefits and their advancement of regional goals outweigh the risk from flooding: a. remediation of existing environmental degradation or contamination, particularly on a closed military base; b. a transportation facility, public utility, or other critical infrastructure that is necessary for existing development or to serve planned development; c. a project that will concentrate employment or housing near existing or committed transit service (whether by public or private funds or as part of a project), particularly within those Priority Development Areas that are established by the Association of Bay Area Governments and endorsed by the Commission, and that includes a financial strategy for flood protection that will minimize the burdens on the public and a sea level rise adaptation strategy that will adequately provide for the resilience and sustainability of the project over its designed lifespan; and d. a natural resource restoration or environmental enhancement project. The following specific types of projects should be encouraged if they do not negatively impact the Bay and do not increase risks to public safety: e. repairs of an existing facility; f. a small project; g. a use that is interim in nature and either can be easily removed or relocated to higher ground or can be amortized within a period before removal or relocation of the proposed use would be necessary; and h. a public park.	**Consistent.** As documented in **Table 4.3-1** and **Table 4.3-2**, the Baylands Specific Plan is consistent with the Brisbane General Plan and the regional sustainable communities strategy, *Plan Bay Area 2050*, which designates the site for transit-oriented urban development as part of a Bi-County Priority Development Area. Development of housing within the Baylands is also critical to the City's ability to provide its share of regional housing needed through 2031. As discussed in Section 4.4, *Socioeconomic Effects*, the Baylands Specific Plan is anticipated to provide approximately 80 percent (1,288) of the City's 2023–2031 citywide need for housing through 2031 (1,588 dwelling units). Baylands habitat conservation, recreational, and development areas have been designed in accordance with the most recent State guidance using the best available science-based projection for sea level rise at the end of the century. The Baylands Specific Plan, as mitigated, includes a sea level rise adaptation strategy that places residential, commercial, and other Baylands buildings so as not to be subject to sea level rise of 83 inches through the Year 2100. Recreational and other open space/open areas were designed so as not to be subject to 41 inches of sea level rise through the Year 2100. Habitat restoration and enhancement along Visitacion Creek and the north shore of the Brisbane Lagoon (Lagoon Park) provides for natural progression of habitat types in response to sea level rise to ensure that lands required for mitigation of impacts to wetlands and non-wetland waters would: • Provide the required acreage of mitigation land following anticipated sea level rise through the end of the century; and • Adequately provide for the resilience and sustainability of the project over its designed lifespan without placing a financial burden on the City or any other public agency.
Safety of Fills	
Even if the Bay Plan indicates that a fill may be permissible, no fill or building should be constructed if hazards cannot be overcome adequately for the intended use in accordance with the criteria prescribed by the Engineering Criteria Review Board.	**Consistent.** No fills are proposed within the Bay or Lagoon other than establishing vegetative habitat along the north shore of the lagoon where rip rap is now present.

Existing Plan and Policies	Consistency of the Baylands Specific Plan
To provide vitally needed information on the effects of earthquakes on all kinds of soils, installation of strong-motion seismographs should be required on all future major landfills. In addition, the Commission encourages installation of strong-motion seismographs in other developments on problem soils, and in other areas recommended by the U.S. Geological Survey, for purposes of data comparison and evaluation.	**Consistent.** Although no fills are proposed within the Bay or Lagoon other than establishing vegetative habitat along the north shore of the lagoon where rip rap is now present, a strong-motion seismograph would be provided within the Baylands if so required by BCDC.
Adequate measures should be provided to prevent damage from sea level rise and storm activity that may occur on fill or near the shoreline over the expected life of a project. The Commission may approve fill that is needed to provide flood protection for existing projects and uses. New projects on fill or near the shoreline should either be set back from the edge of the shore so that the project will not be subject to dynamic wave energy, be built so the bottom floor level of structures will be above a 100-year flood elevation that takes future sea level rise into account for the expected life of the project, be specifically designed to tolerate periodic flooding, or employ other effective means of addressing the impacts of future sea level rise and storm activity. Rights-of-way for levees or other structures protecting inland areas from tidal flooding should be sufficiently wide on the upland side to allow for future levee widening to support additional levee height so that no fill for levee widening is placed in the Bay.	**Consistent.** Long-term maintenance of authorized protective measures will be required.
Shoreline Protection	
New shoreline protection projects and the maintenance or reconstruction of existing projects and uses should be authorized if (a) the project is necessary to provide flood or erosion protection for (i) existing development, use or infrastructure, or (ii) proposed development, use or infrastructure that is consistent with other Bay Plan policies; (b) the type of the protective structure is appropriate for the project site, the uses to be protected, and the causes and conditions of erosion and flooding at the site; (c) the project is properly engineered to provide erosion control and flood protection for the expected life of the project based on a 100-year flood event that takes future sea level rise into account; (d) the project is properly designed and constructed to prevent significant impediments to physical and visual public access; (e) the protection is integrated with current or planned adjacent shoreline protection measures; and (f) adverse impacts to adjacent or nearby areas, such as increased flooding or accelerated erosion, are avoided or minimized. If such impacts cannot be avoided or minimized, measures to compensate should be required. Professionals knowledgeable of the Commission's concerns, such as civil engineers experienced in coastal processes, should participate in the design.	**Consistent.** As part of the analyses undertaken for this EIR, a "Sea-Level Rise Technical Report" (EIR Appendix L) considers existing flood hazards from coastal, stormwater, and groundwater sources and how these hazards will change with sea level rise through the Year 2100. The SLR Technical Report also provides mapping of future habitats and open space as sea levels rise. The report found the Specific Plan to be generally consistent with sea level rise planning guidance and, because the Specific Plan raises much of the ground surface, to be resilient to even the upper range of sea level rise projected for 2100. Certain areas of the site were, however, determined to be vulnerable to sea levels as documented in Appendix L and Draft EIR Section 4.14, *Hydrology and Water Quality*, which includes mitigation measures addressing these areas of vulnerability.

Existing Plan and Policies	Consistency of the Baylands Specific Plan
Riprap revetments, the most common shoreline protective structure, should be constructed of properly sized and placed material that meet sound engineering criteria for durability, density, and porosity. Armor materials used in the revetment should be placed according to accepted engineering practice, and be free of extraneous material, such as debris and reinforcing steel. Generally, only engineered quarry stone or concrete pieces that have either been specially cast, are free of extraneous materials from demolition debris, and are carefully selected for size, density, and durability will meet these requirements.	**Consistent.** No new rip rap is proposed within the Baylands. Vegetative habitat is, however, proposed along the north shore of the lagoon where rip rap is now present.
Authorized protective projects should be regularly maintained according to a long-term maintenance program to assure that the shoreline will be protected from tidal erosion and flooding and that the effects of the shoreline protection project on natural resources during the life of the project will be the minimum necessary.	**Consistent.** Long-term maintenance of authorized protective measures will be required.
All shoreline protection projects should evaluate the use of natural and nature-based features such as marsh vegetation, levees with transitional ecotone habitat, mudflats, beaches, and oyster reefs, and should incorporate these features to the greatest extent practicable. Ecosystem benefits, including habitat and water quality improvement, should be considered in determining the amount of fill necessary for the project purpose. Suitability and sustainability of proposed shoreline protection and restoration strategies at the project site should be determined using the best available science on shoreline adaptation and restoration. Airports may be exempt from incorporating natural and nature-based features that could endanger public safety by attracting potentially hazardous wildlife.	**Consistent.** The Specific Plan provides for naturalized drainage courses and wetland habitat areas to prevent pollutants from entering the Bay or Lagoon. In addition, the Specific Plan provides for establishing vegetative habitat along the north shore of the lagoon where rip rap is now present.
Adverse impacts to natural resources and public access from new shoreline protection should be avoided. When feasible, shoreline protection projects should include components to retain safe and convenient water access, for activities such as fishing, swimming, and boating, especially in communities lacking such access. Where significant impacts cannot be avoided, mitigation or alternative public access should be provided. Shoreline protection projects that include natural and nature-based features may be self-mitigating or require less mitigation than projects that do not include any natural or nature-based features.	**Consistent.** The Specific Plan provides for naturalized drainage courses and wetland habitat areas to prevent pollutants from entering the Bay or Lagoon. In addition, the Specific Plan provides for establishing vegetative habitat along the north shore of the lagoon where rip rap is now present. Analysis of impacts associated with proposed shoreline protection are provided in Section 4.6, *Biological Resources*, and Section 4.14, *Hydrology and Water Quality*.
Recreation	
Because of the need to increase the recreational opportunities available to Bay Area residents, small amounts of Bay fill may be allowed for waterfront parks and recreational areas that provide substantial public benefits and that cannot be developed without some filling.	**Consistent.** No fills are proposed within the Bay or Lagoon other than establishing vegetative habitat along the north shore of the lagoon where rip rap is now present.

Existing Plan and Policies	Consistency of the Baylands Specific Plan
Public Access	
A proposed fill project should increase public access to the Bay to the maximum extent feasible, in accordance with the policies for Public Access to the Bay.	**Consistent.** No fills are proposed within the Bay or Lagoon other than establishing vegetative habitat along the north shore of the lagoon where rip rap is now present within Lagoon Park. Public access will be permitted within a waterfront park (Lagoon Park) to be developed along the north shore of the lagoon.
In addition to the public access to the Bay provided by waterfront parks, beaches, marinas, and fishing piers, maximum feasible access to and along the waterfront and on any permitted fills should be provided in and through every new development in the Bay or on the shoreline, whether it be for housing, industry, port, airport, public facility, wildlife area, or other use, except in cases where public access would be clearly inconsistent with the project because of public safety considerations or significant use conflicts, including unavoidable, significant adverse effects on Bay natural resources. In these cases, in lieu public access at another location, preferably near the project, should be provided. If in lieu public access is required and cannot be provided near the project site, the required access should be located preferably near identified vulnerable or disadvantaged communities lacking well-maintained and convenient public access in order to foster more equitable public access around the Bay Area.	**Consistent.** The Specific Plan provides for the completion of the Bay Trail through the Baylands site, as well as for a waterfront park along the north shore of the Brisbane Lagoon and trails within Visitacion Creek.
Public access to some natural areas should be provided to permit study and enjoyment of these areas. However, some wildlife species are sensitive to human intrusion. For this reason, projects in such areas should be carefully evaluated in consultation with appropriate agencies to determine the appropriate location and type of access to be provided.	**Consistent.** The Specific Plan provides for the completion of the Bay Trail through the Baylands site, as well as for a waterfront park along the north shore of the Brisbane Lagoon and trails within Visitacion Creek. Analysis of the potential impacts of such trails and recreational features is provided in Section 4.6, *Biological Resources*.
Public access should be sited, designed, and managed to prevent significant adverse effects on wildlife. To the extent necessary to understand the potential effects of public access on wildlife, information on the species and habitats of a proposed project site should be provided, and the likely human use of the access area analyzed. In determining the potential for significant adverse effects (such as impacts on endangered species, impacts on breeding and foraging areas, or fragmentation of wildlife corridors), site specific information provided by the project applicant, the best available scientific evidence, and expert advice should be used. In addition, the determination of significant adverse effects may also be considered within a regional context. Siting, design, and management strategies should be employed to avoid or minimize adverse effects on wildlife, informed by the advisory principles in the Public Access Design Guidelines. If significant adverse effects cannot be avoided or reduced to a level below significance through siting, design, and management strategies, then in lieu public access should be provided, consistent with the project and providing public access benefits equivalent to those that would have been achieved from on-site access. Where appropriate, effects of public access on wildlife should be monitored over time to determine whether revisions of management strategies are needed.	**Consistent.** Analysis of the impacts of such trails and recreational features is provided in Section 4.6, *Biological Resources*.

Existing Plan and Policies	Consistency of the Baylands Specific Plan
Public access should be sited, designed, managed, and maintained to avoid significant adverse impacts from sea level rise and shoreline flooding.	**Consistent.** The Sea Level Rise Technical Report and Section 4.14, *Hydrology and Water Quality*, analyzed impacts associated with public access along the Bay Trail and Visitacion Creek as well as within Lagoon Park.
In some areas, a small amount of fill may be allowed if the fill is necessary and is the minimum absolutely required to develop the project in accordance with the Commission's public access requirements.	**Consistent.** No fills are proposed within the Bay or Lagoon other than that which is necessary to establish vegetative habitat along the north shore of the lagoon where rip rap is now present within Lagoon Park.
Roads near the edge of the water should be designed as scenic parkways for slow-moving, principally recreational traffic. The roadway and right-of-way design should maintain and enhance visual access for the traveler, discourage through traffic, and provide for safe, separated, and improved physical access to and along the shore. Public transit use and connections to the shoreline should be encouraged where appropriate.	**Consistent.** The only roadways adjacent to the water's edge are Sierra Point Parkway and Lagoon Road. Sierra Point Parkway, which runs along the east side of the Lagoon adjacent to the US 101 freeway will remain in its current location. Lagoon Road is proposed to be realigned to the north to provide for sea level rise through the end of the century and align with existing southbound on- and off-ramps along the US 101 freeway.
Appearance, Design, and Scenic Views	
To enhance the visual quality of development around the Bay and to take maximum advantage of the attractive setting it provides, the shores of the Bay should be developed in accordance with the Public Access Design Guidelines.	**Consistent.** The Bay Trail, Visitacion Creek, and Lagoon Park will be designed in accordance with the Public Access Design Guidelines.
In some areas, a small amount of fill may be allowed if the fill is necessary—and is the minimum absolutely required—to develop the project in accordance with the Commission's design recommendations.	**Consistent.** No fills are proposed within the Bay or Lagoon other than establishing vegetative habitat along the north shore of the lagoon where rip rap is now present within Lagoon Park.
Shoreline developments should be built in clusters, leaving an open area around them to permit more frequent views of the Bay. Developments along the shores of tributary waterways should be Bay-related and should be designed to preserve and enhance views along the waterway, so as to provide maximum visual contact with the Bay.	**Consistent.** No buildings are proposed along the waterfront. The Bay Trail, Visitacion Creek, and Lagoon Park will be designed in accordance with the Public Access Design Guidelines.
Views of the Bay from vista points and from roads should be maintained by appropriate arrangements and heights of all developments and landscaping between the view areas and the water. In this regard, particular attention should be given to all waterfront locations, areas below vista points, and areas along roads that provide good views of the Bay for travelers, particularly areas below roads coming over ridges and providing a "first view" of the Bay (shown in Bay Plan Maps, Natural Resources of the Bay).	**Consistent.** Specific Plan development would not block views of the Bay from the US 101 freeway. While views of the Bay are not currently available from roadways within or adjacent to the Specific Plan area, proposed development would partially obscure blue water views of the Bay from public viewpoints in Brisbane (see Impact AES-1).
Mitigation	
Projects should be designed to avoid adverse environmental impacts to Bay natural resources such as to water surface area, volume, or circulation and to plants, fish, other aquatic organisms and wildlife habitat, subtidal areas, or tidal marshes or tidal flats. Whenever adverse impacts cannot be avoided, they should be minimized to the greatest extent practicable. Finally, measures to compensate for unavoidable adverse impacts to the natural resources of the Bay should be required. Mitigation is not a substitute for meeting the other requirements of the McAteer-Petris Act.	**Consistent.** Analysis of the Specific Plan's impacts to biological resources is provided in Section 4.6, *Biological Resources*, which indicates that the Specific Plan, in combination with EIR mitigation measures, would have a beneficial impact on wetlands and non-wetland waters.

Existing Plan and Policies	Consistency of the Baylands Specific Plan
The amount and type of compensatory mitigation should be determined for each mitigation project based on a clearly identified rationale that includes an analysis of the probability of success of the mitigation project; the expected time delay between the impact and the functioning of the mitigation site; and the type and quality of the ecological functions of the proposed mitigation site as compared to the impacted site.	**Consistent.** Analysis of the Specific Plan's impacts to biological resources is provided in Section 4.6, *Biological Resources*, which indicates that the Specific Plan, in combination with EIR mitigation measures, would have a beneficial impact on wetlands and non-wetland waters.
To increase the potential for the ecological success and long-term sustainability of compensatory mitigation projects, resource restoration should be selected over creation where practicable, and transition zones and buffers should be included in mitigation projects where feasible and appropriate. In addition, mitigation site selection should consider site specific factors that will increase the likelihood of long-term ecological success, such as existing hydrological conditions, soil type, adjacent land uses, and connections to other habitats.	**Consistent.** The Specific Plan provides for extensive restoration of wetlands and non-wetland waters.
Mitigation should, to the extent practicable, be provided prior to, or concurrently with those parts of the project causing adverse impacts.	**Consistent.** Because impacts to wetlands and non-wetland waters would be caused by the large-scale grading operation required for site remediation, landfill closure, and flood/sea level rise protection of future building pads within the Baylands, mitigation of impacts cannot occur until grading activities are completed. The Specific Plan does, however, include a phasing program that requires restoration of wetlands and non-wetland waters concurrent with site development.
San Francisco International Airport Land Use Compatibility Plan	
IP-1. AIRPORT INFLUENCE AREA A – REAL ESTATE DISCLOSURE AREA. Within Area A, the real estate disclosure requirements of state law apply Section 11010 of the Business and Professions Code, which requires people offering subdivided property for sale or lease to disclose the presence of all existing and planned airports within 2 miles of the property. The law requires that, if the property is within an "airport influence area" designated by the airport land use commission, the following statement must be included in the notice of intention to offer the property for sale: NOTICE OF AIRPORT IN VICINITY. This property is presently located in the vicinity of an airport, within what is known as an airport influence area. For that reason, the property may be subject to some of the annoyances or inconveniences associated with proximity to airport operations (for example: noise, vibration, or odors). Individual sensitivities to those annoyances can vary from person to person. You may wish to consider what airport annoyances, if any, are associated with the property before you complete your purchase and determine whether they are acceptable to you.	**Consistent.** By law, property owners are required to provide real estate disclosure regarding airport impacts.

Program EIR Mitigation Measures

No mitigation measures are carried forward from the Program EIR.

Additional Mitigation Measures

MM LUP-2: Consistency with General Plan Policy C.41 and the Metropolitan Transportation Commission's Transit-Oriented Communities Policy (Resolution No. 4530). The Specific Plan shall be revised to include the following requirements:

- **Residential Development Intensity.** Residential development within one-half mile of the Caltrain Bayshore Station shall average a minimum of 25 dwelling units per acre as measured on a block-by-block basis.
- **Housing Affordability.** A minimum of 15 percent of dwelling units within one-half mile of the Caltrain Bayshore Station shall be deed-restricted affordable to low-income households.
- **Maximum Parking Ratios.** The maximum per unit parking ratio for Multi-Family Low, Townhome, and Duplex/Single Family housing types shall be reduced from 1.25 to 1.0 spaces per unit.
- **Commercial Office Development Intensity.** Commercial office development within one-half mile of the Caltrain Bayshore Station shall have an average minimum FAR of 2.0 as measured on a block-by-block basis.
- **Bicycle Parking.** A minimum of one secure bicycle parking space per multi-family dwelling unit.

Significance Conclusion for Impact LUP-2 with Implementation of All Mitigation Measures

Inconsistencies with General Plan Policies and Programs would be resolved as follows:

- **General Plan Policy LU.11** and **Program BL.3b** in relation to views of San Francisco Bay. Mitigation Measures MM AES-1a and MM AES-1b would reduce the impact to less than significant and therefore achieve consistency with this policy and program.
- **Policy 176** in relation to noise from pile driving operations required for constructing buildings within the Baylands. Mitigation Measures MM NOI-1a through MM NOI-1e would minimize impacts associated with pile driving by requiring alternative methods for construction of pile foundations where geologic conditions permit.

  As determined in geotechnical reports prepared for the Baylands as part of the Program EIR and Specific Plan EIR, soils and geologic conditions underlying the Specific Plan

area are such that pile foundations are required throughout most of the site for buildings in excess of 4 stories.

Because (1) pile driving is a necessary component of developing the Baylands and implementing the land uses approved for the site in GP-1-18 and Measure JJ and (2) pile driving activities and resulting impacts will be minimized by Mitigation Measures MM NOI-1b, limiting hours when pile driving could occur and MM NOI-1e, which prohibits pile driving for any building where geologic or other unique conditions exist at the site-specific construction location that preclude the use of quieter, alternative pile installation techniques. Thus, impacts associated with pile driving would not constitute an inconsistency with the General Plan as a whole.

Revisions to the Specific Plan required by Mitigation Measure MM LUP-2 would ensure consistency with MTC's Resolution 4530 by requiring:

- Residential development within one-half mile of the Caltrain Bayshore Station to average a minimum of 25 du/ac as measured on a block-by-block basis;
- A minimum of 15 percent of dwelling units within one-half mile of the Caltrain Bayshore Station to be deed-restricted affordable to low-income households;
- The maximum per unit parking ratio for Multi-Family Low, Townhome, and Duplex/Single Family housing types to be reduced from 1.25 to 1.0 spaces per unit; and
- Commercial office development within one-half mile of the Caltrain Bayshore Station to have an average minimum FAR of 2.0 as measured on a block-by-block basis.

Consistency of the Specific Plan with the Brisbane General Plan and Regional Plans

Brisbane General Plan

The Specific Plan is consistent with the General Plan as a whole. Inconsistencies with General Plan policies identified in **Table 4.3-1** would not obstruct achievement of the General Plan's goals and objectives for the following reasons.

- **General Plan Policy LU.11:** As demonstrated in **Table 4.5-2a** through **Table 4.5-r**, the placement of taller Baylands buildings would substantially diminish scenic vistas from some public viewpoints and would therefore not "preserve and enhance public views of the Mountain and the Bay" as called for by this policy. Mitigation Measures MM AES-1a and AES-1b would reduce the impact to less than significant and therefore achieve consistency with this policy.
- **General Plan Policy C.2:** Intersections along certain arterial roadways outside of the Baylands would exceed the General Plan level of service standard of LOS "D" due to regional and local background traffic. Delay metrics, such as level of service are, by law,

not considered to be indicative of significant impacts. Because the Specific Plan would (1) provide transit-oriented development, (2) implement a transportation demand management program, (3) reduce regional vehicle miles traveled, (4) provide extensive pedestrian and bicycle trails, and (5) establish a local shuttle system, its contribution to exceedances of the General Plan LOS standard would not constitute an inconsistency with the General Plan as a whole.

- **General Plan Policy 176:** Because the soils that underlie Baylands development areas generally consist of unconsolidated fill materials that were placed to create the former rail yard and former landfill, pile foundations will be required for as much as 70 percent of the buildings within the Baylands. While quieter alternatives than impact pile driving may be feasible for some Baylands buildings and it may be possible to meet City noise standards when driving piles on a site-specific building project, the EIR's noise analysis determined that a significant impact would result due to the likelihood that pile driving would be undertaken for multiple buildings simultaneously and the length of time for building construction would be ongoing. EIR mitigation measures will be implemented to minimize noise and vibration impacts of Baylands pile driving activities. Because (1) pile driving is a necessary component of developing the Baylands and implementing the land uses approved for the site in GP-1-18 and Measure JJ and (2) pile driving activities and resulting impacts will be minimized, impacts associated with pile driving would not constitute an inconsistency with the General Plan as a whole.
- **Policy BL.1 G:** At buildout, renewable energy generation within the Specific Plan area would be less than the development's demand for electricity. While construction of the utility-scale battery storage facility would achieve energy neutrality for Baylands development, construction of the utility-scale battery facility is dependent on economic conditions and securing a facility developer to enter into necessary agreements with PG&E for storage of renewable energy. Baylands development would produce approximately double the amount renewable energy on-site, add 30 MW of distributed battery storage, reduce overall energy demand compared to the project analyzed in the Program EIR, not extend natural gas service to new uses within the Baylands, and provide renewable electrical energy to meet demands not met by on-site renewable energy generation.
- In addition, the Specific Plan does not establish a post-construction performance standard for solid waste diversion and therefore does not present a zero-waste program. Baylands development would, at a minimum, participate in the same waste diversion programs provided by Recology operations to residential and commercial customers

within the City and County of San Francisco, which exceed the requirements of state law and are more extensive than those currently available within Brisbane.[99]

Consistency with Regional Plans and Programs

As documented in **Table 4.3-2**, the Specific Plan would be inconsistent with the Metropolitan Transportation Commission's Transit-Oriented Communities Policy (Resolution No. 4530) for development within one-half mile of a transit stop. However, Mitigation Measure MM LUP-2a requires Specific Plan revisions to comply with this regional policy. Thus, the Specific Plan would be consistent with the Brisbane General Plan, *Plan Bay Area 2050*, the Metropolitan Transportation Commission's Transit-Oriented Communities Policy, the San Francisco Bay Plan, and the Airport Land Use Compatibility Plan for the Environs of San Francisco International Airport

4.3.7 REFERENCES – LAND USE AND PLANNING POLICIES

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[99] CalRecycle, *Disposal Rate Calculator*, access on June 21, 2024, Disposal Rate Calculator. For 2023, San Francisco reported a disposal rate of 3.4 pounds per resident and 3.9 pounds per employee, which are below the target rates of 6.6 pounds per resident and 10.6 pounds per employee set for San Francisco by Cal Recycle. By comparison, South San Francisco Scavenger achieved a disposal rate of 12.6 pounds per resident and 6.9 pounds per employee, which are also below the target rates of 16.9 pounds per resident and 7.9 pounds per employee set for Brisbane by Cal Recycle.

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4.4 POPULATION AND HOUSING

4.4.1 INTRODUCTION

a. Overview

This section evaluates the direct and indirect effects of the Baylands Specific Plan in relation to population, housing, employment, and urban decay. The inclusion of population and housing questions in Appendix G of the California Environmental Quality Act (CEQA) Guidelines checklist recognizes that economic and social effects—substantial unplanned growth, displacing substantial numbers of people or housing—could lead to physical environmental effects, even if socioeconomic effects would not, in and of themselves, be considered physical environmental impacts. Thus, analysis of population, housing, and employment growth from the Baylands Specific Plan addresses such growth as potential precursors to physical environmental impacts.

Increases in population and employment that would result from Baylands development would be physically manifested in the form of new housing, commercial, office, and other types of development, resulting in the construction and long-term post-construction impacts that are addressed throughout this Environmental Impact Report (EIR). In addition, the relative balance between the number of jobs and amount of housing in a given area affects vehicle miles traveled and associated emissions of air pollutants and greenhouse gases (GHGs), as well as energy consumption related to vehicular travel.

CEQA Guidelines Sections 15131(a) and 15064(e):
Population and Housing

CEQA Guidelines Section 15131(a)

(a) Economic or social effects of a project shall not be treated as significant effects on the environment. An EIR may trace a chain of cause and effect from a proposed decision on a project through anticipated economic or social changes resulting from the project to physical changes caused in turn by the economic or social changes. The intermediate economic or social changes need not be analyzed in any detail greater than necessary to trace the chain of cause and effect. The focus of the analysis shall be on the physical changes.

CEQA Guidelines Section 15064(e)

(e) Economic and social changes resulting from a project shall not be treated as significant effects on the environment. Economic or social changes may be used, however, to determine that a physical change shall be regarded as a significant effect on the environment. Where a physical change is caused by economic or social effects of a project, the physical change may be regarded as a significant effect in the same manner as any other physical change resulting from the project. Alternatively, economic and social effects of a physical change may be used to determine that the physical change is a significant effect on the environment. If the physical change causes adverse economic or social effects on people, those adverse effects may be used as a factor in determining whether the physical change is significant. For example, if a project would cause overcrowding of a public facility and the overcrowding causes an adverse effect on people, the overcrowding would be regarded as a significant effect."

This section therefore describes existing and projected population, housing, and employment characteristics of the Baylands, City of Brisbane, and the surrounding region and evaluates the

population, housing, and employment that would result from the Baylands Specific Plan as precursors to physical environmental effects, many of which are addressed in other sections of this EIR.[100]

This section examines associated physical environmental effects that would result should proposed Baylands development (1) induce substantial unplanned population growth either directly or indirectly, or (2) displace existing housing or people. In addition, this section of the EIR examines the extent to which the economic effects of commercial retail uses proposed for the Baylands could result in physical environmental changes within the Baylands' market area, such as physical deterioration of existing retail centers or facilities.

b. Definitions

Affordable housing, under state statutes, refers to housing that costs no more than 30 percent of gross household income and is most often used in relation to housing for lower and moderate-income households. Housing costs include rent or mortgage payments, utilities, taxes, insurance, homeowner association fees, and other related costs. As used in this document, "affordable housing" refers to housing that would cost no more than 30 percent of gross household income for lower income and moderate-income households whose income is no greater than 80 percent or 120 percent of the countywide median income for San Mateo County ($186,600 for a family of four), respectively (SMCDOH 2024).

All economic segments of the community includes very low-, low-, moderate-, and above moderate-income households within a city or unincorporated portions of a particular county.

California Department of Housing and Community Development (HCD) is the state agency responsible for administering state-sponsored housing programs and for reviewing city and county General Plan Housing Elements to determine their compliance with state housing law.

Dwelling unit, housing unit, or residential unit is a room or group of rooms designed to be occupied by one or more individuals living separately from other individuals. A dwelling unit contains access to a private toilet and kitchen facilities and has direct access to the outside or to a common interior hallway.

Household refers to an occupied dwelling unit, including all persons living in the dwelling unit, whether or not they are related. Thus, a single person living in an apartment and a family or a group of unrelated people living in a house are each considered to be a household.

Jobs to housing ratio is a general measure of the "balance" between the number of jobs and number of housing units within a geographic area, without regard to economic constraints or

[100] The population, housing, and employment growth that would result from Baylands development forms the basis for quantified analyses of transportation, air quality greenhouse gas, noise, energy, and other physical environmental effects analyzed in Draft EIR Chapter 4.

individual preferences. The ratio expresses quantitatively the relationship between the number of people working and number of dwelling units housing the people living in a given area.

Lower Income is a generic term referring to very low and low-income households.

Regional Housing Needs Allocation (RHNA) is a state-mandated process for determining how many housing units, including affordable units, each community must plan for housing to accommodate all economic segments of the community. The Association of Bay Area Governments (ABAG) is responsible for working with HCD to determine the amount of housing needed within the nine-county San Francisco Bay Area region. ABAG allocates regional total housing needs among city and county jurisdictions within the region. Allocations are based on factors that consider existing employment, employment growth, household growth, and the availability of transit; need is determined for households in all income categories from very low to above moderate. Specific allocations are defined for very low-, low-, moderate-, and above moderate-income groups, which are defined as follows:

- **Extremely Low Income:** Household income less than 30 percent of the San Mateo County median income.[101] This equates to a four-person household annual income below $58,750.
- **Very Low Income:** Household income less than 50 percent of the San Mateo County median income. This equates to a four-person household annual income below $97,900.
- **Low Income:** Household income between 50.1 and 80 percent of the San Mateo County median income. This equates to a four-person household annual income below $156,650.
- **Moderate Income:** Household income between 80.1 and 120 percent of the San Mateo County median income. This equates to a four-person household annual income below $223,920.
- **Above Moderate Income:** Household income greater than 120 percent of the San Mateo County median income. This equates to a four-person household annual income greater than $223,900 (SMCDOH 2024).

Urban decay refers to the extensive and widespread physical deterioration of properties or structures in an area caused by a downward spiral of business closures and multiple long-term vacancies. This physical deterioration to properties or structures is so prevalent, substantial, and lasting for a significant period of time that it impairs the proper utilization of the properties or structures, along with the health, safety, and welfare of the surrounding community. The manifestations of urban decay include such visible conditions as plywood-boarded doors and windows, uncontrolled truck parking, long-term unauthorized use of the properties and parking lots, graffiti, dumping of refuse on-site, overturned dumpsters, broken parking barriers,

[101] For purposes of Housing Element preparation, "extremely low income" (less than 30 percent of County median income) is often included as part of "very low income" (less than 50 percent of County median income).

broken glass, dead trees and shrubbery together with weeds, lack of building maintenance, abandonment of multiple buildings, and unsightly and dilapidated fencing.

4.4.2 PHYSICAL ENVIRONMENTAL SETTING

a. Baseline

The baseline for analysis of population and housing effects consists of conditions that existed at the release of the second Notice of Preparation during Spring 2023. When existing conditions and analyses address a full year of data, the most recent year for which data is available is used and specific citations are provided indicating the year used to describe existing conditions and for analysis purposes.

b. Regional Population, Housing, and Employment Trends

Housing Production and Affordability

Given a limited supply of both market-rate and affordable housing, combined with strong demand driven by exceptional regional economic performance, Bay Area rents and home prices have risen rapidly. Plan Bay Area 2050 reports, the Bay Area "may have the most severe housing crisis of any of the nation's large metro areas." In particular, there has been a mismatch between employment growth relative to the housing supply. Overall, the Bay Area has added nearly two jobs for every housing unit built since 1990.

The deficit in housing production has been particularly severe in terms of housing affordable to lower- and middle-wage workers, especially in many of the jobs-rich, high-income communities along the Peninsula and in Silicon Valley, states Plan Bay Area 2050. The booming regional economy combined with increased household formation among the millennial generation has further contributed to an ever more acute housing crunch.

Housing affordability has significantly worsened over time. According to Plan Bay Area 2050, home prices are at record levels in some Bay Area counties and near record levels in others. Rent payments have almost doubled in real dollars since the 1970s. While median wages are close to the top nationally, the Bay Area has by far the highest median home sale prices of any major metro region in the country. The region is now also home to three of the five most expensive rental markets in the nation.

Given insufficient production of affordable housing, Plan Bay Area reports, "many individuals who perform important but lower paying jobs face either substandard or overcrowded and unhealthy housing; costly, long-distance work commutes; or sometimes even homelessness — the most severe expression of the region's housing shortage. Rising prices in the region's core have driven many lower-income households to outlying jurisdictions farther away from jobs,

transit and amenities, even as low- and middle-wage job growth has been concentrated in three counties: San Francisco, San Mateo, and Santa Clara. This shift contributes to increased development pressures on open space and agricultural lands, more pollution from passenger vehicles, adverse health impacts, higher transportation costs, and greater levels of highway and transit congestion."

Regional Growth Forecasts

The regional forecast prepared as part of Plan Bay Area 2050 shows that the Bay Area is projected to grow by nearly 1.4 million households between 2015 and 2050, 25 percent of which will occur within San Francisco and San Mateo counties. At the same time, regional employment is projected to grow by 1.4 million jobs, 25 percent of which will occur within San Francisco and San Mateo counties.

Plan Bay Area 2050's core strategy is to accommodate as much of this forecasted growth as feasible by intensifying development within existing urban areas in proximity to transit. Plan Bay Area 2050 thus guides approximately 69 percent of the region's planned land use growth footprint to existing urban and built-up lands, including directing 46 percent of the region's land use growth footprint to 200 Priority Development Areas.[102] Priority Development Areas encompass existing neighborhoods served by public transit that have been determined by local and regional agencies to be appropriate for additional, compact development.

c. City of Brisbane Population, Housing, and Employment Trends

Current Population and Housing

The California Department of Finance estimates Brisbane's population to be 4,661, with 2,076 dwelling units as of January 1, 2024, as indicated in **Table 4.4-1**. Brisbane's estimated housing vacancy rate was 4.7 percent and its population per household was 2.35.

[102] Priority Development Areas typically consist of existing low- to moderate-intensity development in proximity to transit and designated as such due to their capability of supporting substantially higher intensity development.

Table 4.4-1: Existing City of Brisbane Population and Housing, January 1, 2024

	Number	Percent
Total Population	**4,661**	
In Households	4,645	
Group Quarters	16	
Total Housing Units	**2,076**	
Single Family Detached Units	1,199	57.8
Single Family Attached Units	256	12.3
Multi-Family (2-4 units) Units	228	11.0
Multi-Family (5+ units) Units	329	15.8
Mobile Homes	64	3.1

SOURCE: California Department of Finance, 2024.

Current Employment

The top three industries by number of jobs in the City of Brisbane include manufacturing and wholesale, professional and managerial services, and transportation and utilities. The City has a much higher job to household ratio than San Mateo County (3.55 and 1.59, respectively), which means there are substantially more employment opportunities per household within Brisbane than the average throughout San Mateo County. According to the California Employment Development Department, as of April 2024, the city had a higher unemployment rate of 7.4 percent than San Mateo County's 3.3 percent (California EDD 2024).

The Brisbane Housing Element reported that Brisbane's "economic opportunity score," which evaluates prevalence of poverty, adult educational attainment, employment, job proximity, and median home value, indicates that the City has the highest economic opportunity score in northern San Mateo County. The City of Brisbane has a score of more than 0.75 for economic opportunity, which means it experiences more positive economic outcomes compared with neighboring jurisdictions. The Housing Element also reported that Brisbane is within average proximity to jobs and is in closer proximity to jobs than the cities of Colma and Daly City to the west.

d. Existing Economic Base; Signs of Urban Decay

From 1990 through 2021, San Mateo County employment increased from 280,660 to 373,595, which reflects an average growth of 0.93 percent. Notably, employment reached 350,425 in 2000, the height of the dot.com boom, but fell to 276,037 during the economic trough of the Great Recession in 2010.

San Mateo County's top employment sectors, in order of number of jobs, are:

- Professional and business services
- Trade, transportation, and utilities
- Information
- Education and health services
- Leisure and hospitality

Of these five sectors, three (professional and business services; information; and education and health services) experienced compounded annual average growth rates in excess of the overall County rate. The trade, transportation, and utilities sector experienced declining employment, shrinking by 30 percent since 1990. An important subsector within professional and business services is scientific research and development services, which represents 30 percent of all jobs in this sector. This subsector is a key occupant of life sciences space.

San Mateo County has a substantial number of jobs associated with the life science industry. Of the 146,130 life science jobs within the nine-county region, 40,349 life science jobs (28 percent) are within San Mateo County. The next highest number of jobs are in Santa Clara County at 38,506 jobs, followed by Alameda County at 36,525 jobs.

Table 4.4-2 presents San Mateo County's growth in sectors typically associated with office space.

Table 4.4-2: San Mateo County Employment Trends for Sectors Typically Associated with Office Space

	1990	2000	2010	2021	Compound Annual Growth Rate	
					1990–2021	2010–2021
Total Private Industry Employment	280,000	350,425	287,037	373,595	0.9%	2.4%
Office-Using Sectors						
Information	8,188	24,311	17,517	54,954	6.3%	11.0%
Financial Services	24,180	24,793	186,617	22,619	-0.2%	1.8%
Professional and Business Services	40,291	80,894	59,856	89,929	2.6%	3.8%
TOTAL	**72,659**	**129,998**	**95,990**	**167,501**	**2.7%**	**5.2%**
Share of All Industry Employment	29.9%	37.1%	33.4%	44.8%	NA	NA

SOURCE: ALH Urban & Regional Economics, *The Baylands Urban Decay Analysis*, July 2023.

Life Science/Office Space

The primary market area for the Specific Plan's office and life science space encompasses the cities of Brisbane and South San Francisco. Existing office and life science development in

Brisbane is primarily located in the Sierra Point portion of Brisbane, adjacent to South San Francisco's office and life science projects within Oyster Point. Genentech, which is now part of Roche, has a substantial presence in South San Francisco. Its November 2020 Master Plan identifies the Genentech campus as encompassing 207 acres of land and 4.7 million square feet of building space in five distinct campuses (City of South San Francisco 2020). Genentech is a significant draw for life science companies, with this locational synergy resulting in a strong life sciences hub in the eastern area of South San Francisco, which is east of US Highway 101 and generally bounded on three sides by San Francisco Bay. Not only does South San Francisco have the largest concentration of life science space in the Bay Area at 11.65 million square feet, its inventory is larger than all competitive Bay Area submarkets (see **Table 4.4-3**).

Table 4.4-3: San Francisco Bay Area Life Science Market Inventory, Year–End 2022

Market Area	Inventory (s.f.)	Market Share
Brisbane	1,143,458	
South San Francisco	11,647,412	
Subtotal Market Area	*13,050,870*	*36.5%*
Remainder of San Mateo County	6,902,220	19.3%
Santa Clara County (Palo Alto, Mountain View)	2,876,508	8.0%
San Francisco	1,390,490	3.9%
East Bay	11,548,871	32.3%
TOTAL BAY AREA MARKET AREA	**35,758,959**	**100.0%**

SOURCE: ALH Urban & Regional Economics, *The Baylands Urban Decay Analysis*, July 2023.

The combined Brisbane and South San Francisco markets have had an average availability rate between 6.7 percent and 8.4 percent. The availability rate for general office space is much higher than for life science space, but due to its relatively small size, its overall impact is moderated. The most extreme example is at the end of 2021, when the life science availability rate was 4.5 percent while the office space availability rate was more than triple at 15.1 percent. The vacancy rate for office space in San Mateo County has historically exceeded 10 percent.

Employment and space demand forecasts for office-using space and life science space between 2023 and 2050 is summarized in **Table 4.4-4**, which indicates an annual average demand of 645,700 square feet of office and life science space. San Mateo County has an existing inventory of approximately 41.1 million square feet of office space and 19.95 million square feet of life science space, for a total of 61.05 million square feet. Thus, if the projected level of demand is realized, the newly absorbed space would comprise a near 28.5 percent increase over San Mateo County's existing inventory.

Table 4.4-4: Projected San Mateo County Office and Life Science Growth, 2023–2050

	2023–2025	2026–2030	2031–2035	2036–2040	2041–2045	2046–2050	TOTAL
Vacancy-Adjusted Incremental Space Demand							
Office Average	2,118,496	2,354,081	2,229,877	2,433,134	2,502,439	2,613,704	**14,251,731**
Life Science	215,831	552,835	572,307	592,464	613,332	637,934	**3,181,703**
TOTAL	**2,334,327**	**2,906,916**	**2,802,184**	**3,025,598**	**3,115,770**	**3,248,638**	**17,433,433**
Average Annual Demand							
Office Average	1,059,248	470,816	445,975	486,627	500.488	522,741	**527,842**
Life Science	107,196	110,567	114,461	118,493	122,666	126,987	**117,841**
TOTAL	**1,167,164**	**581,383**	**560,437**	**605,120**	**623,154**	**649,728**	**645,683**

SOURCE: ALH Urban & Regional Economics, *The Baylands Urban Decay Analysis*, July 2023.

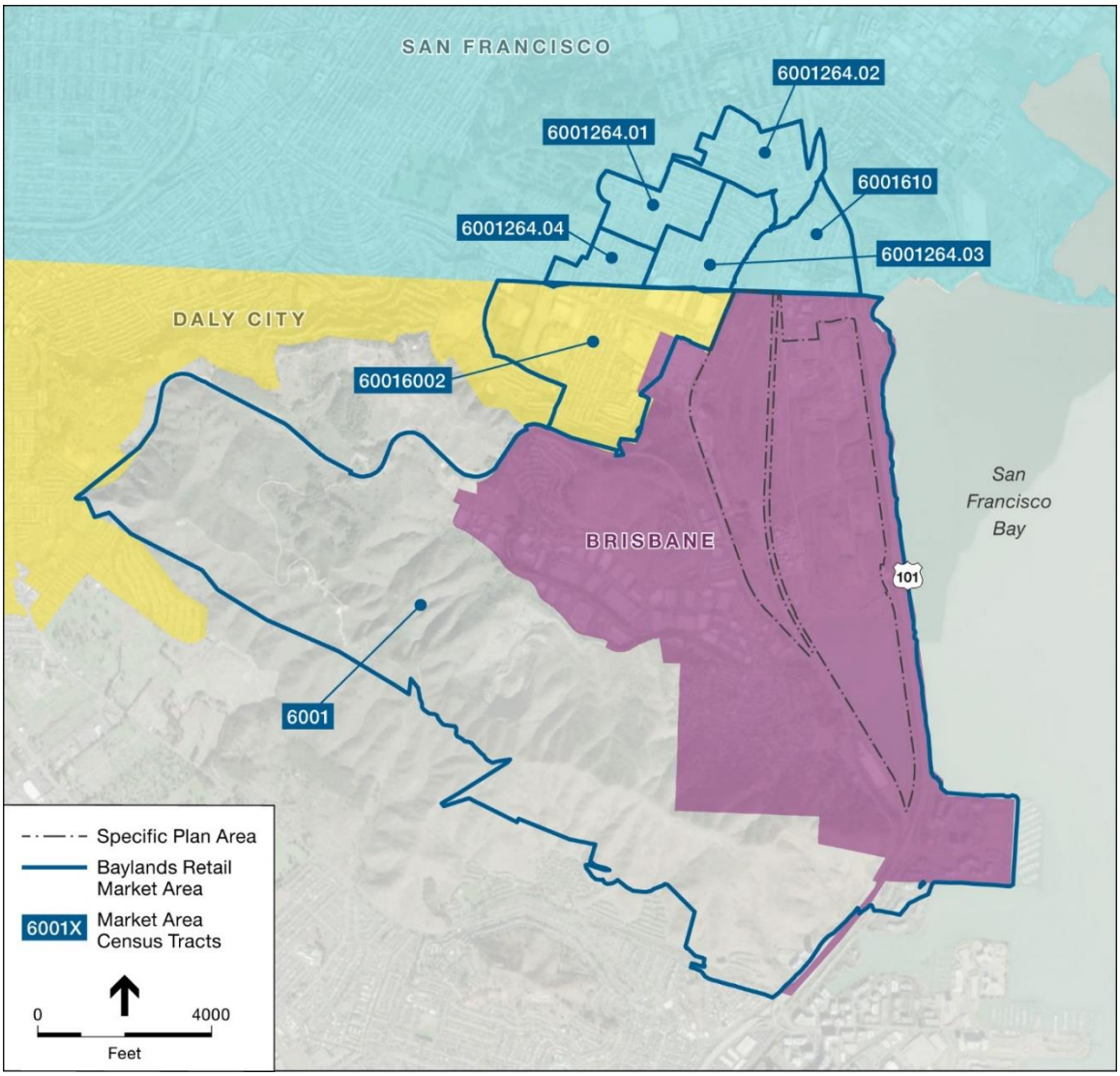
Retail Space

The Baylands retail market area encompasses the area from which the majority of shoppers would originate and includes all of Brisbane, San Francisco's Visitacion Valley neighborhood, other San Francisco areas, and small portions of Daly City along Geneva Avenue (see **Figure 4.4-1**). This retail market area is overwhelmingly characterized by neighborhood-serving retail, oriented toward local residents and some daytime employee commercial needs. The existing retail is located in downtown Brisbane on Old County Road and Visitacion Avenue, and along some of the retail market area arterials, such as Geneva Avenue in Daly City, and Bayshore Boulevard, Sunnydale Avenue, and Leland Avenue in San Francisco, to the north of Brisbane. There is only one shopping center in the retail market area, Brisbane Village Shopping Center on Old County Road, with all other retail offerings generally comprising stand-alone stores or shop space along older commercial corridors.

There are scattered pockets of retail vacancies in the retail market area. In Brisbane, the retail vacancy is largely located at the Brisbane Village Shopping Center. Among the approximately 13 ground floor spaces, three were vacant at the time field reconnaissance was conducted in April and May 2023. One of the spaces has been vacant for a number of years (at least 5), while two of the spaces became vacant during the COVID-19 pandemic. These two spaces were former restaurants. As of February 2025, there were four ground floor vacancies. The adjacent former Bank of America building has remained vacant for several years.

The Brisbane Village Shopping Center, which was built in 1979/1980, is currently in fair physical condition. One of the vacant restaurant spaces has ripped butcher block paper inside the exterior windows, but other than this, there are no indicators suggestive of urban decay. Thus, the center's existing vacancies, including the more long-term vacancies, have not resulted in physical decline of the property.

Figure 4.4-1: Census Tracts Comprising the Baylands Retail Market Area



During field reconnaissance in April 2023, only one obvious small vacancy was identified in a building that has not been well-maintained. The recent sale of a downtown commercial building comprises a positive real estate market indicator, suggestive of demand for downtown Brisbane commercial spaces.

In the Daly City portion of the retail market area, along Geneva Avenue, most of the commercial properties are older, and in generally fair to good condition. At the edge of the retail market area, the new Pacific Place apartment project has ground floor retail space still in the lease up phase, so some spaces are vacant. As these spaces are in a newly constructed project, they are in very good physical condition.

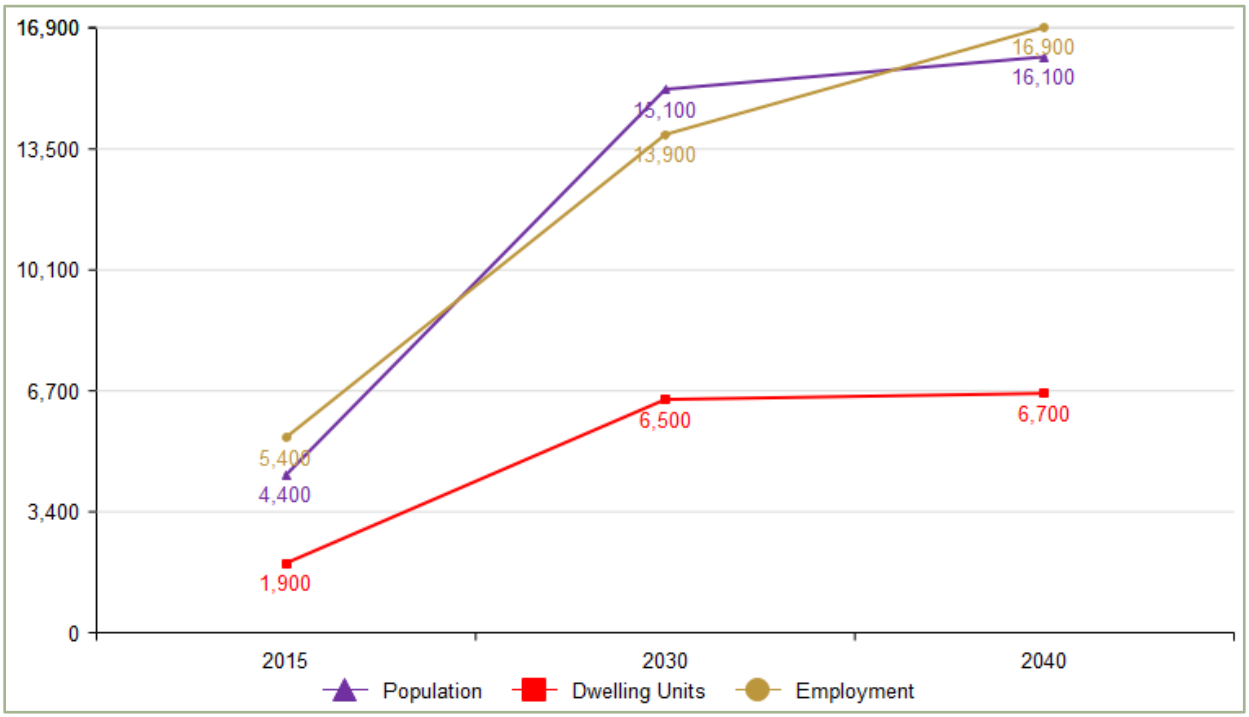
In the portion of the retail market area in San Francisco's Visitacion Valley neighborhood, the commercial retail properties are in generally fair to moderate condition. While sometimes identified as one of San Francisco's most overlooked neighborhoods, Visitacion Valley's core neighborhood shopping district has a good mix of retailers with very little vacancy. While one major vacancy has butcher block paper covering all the windows, many of the existing vacancies show signs of renovation and/or pending occupancy, demonstrating market interest in serving this neighborhood.

In summary, vacancies within the Baylands' retail market area appear to be primarily related to the retail market impacts of the COVID-19 pandemic. While some existing retail market area commercial retail vacancies are in older buildings, they are generally in reasonable condition with no signs of urban decay.

e. Brisbane Projected Growth

Plan Bay Area 2040[103] projects that population, housing, and employment within the City of Brisbane will grow substantially within the next 20 years (see **Figure 4.4-2**).

Figure 4.4-2: Brisbane Population, Housing, and Employment Projections



SOURCE: Plan Bay Area 2040[104]

[103] Because Plan Bay Area 2050 does not provide growth projections for individual cities, Plan Bay Area 2040 provides the most recent growth projections that are available for the City of Brisbane.

[104] *Plan Bay Area 2050* does not provide projections for individual cities.

4.4.3 REGULATORY CONTEXT FOR BAYLANDS DEVELOPMENT

a. Federal Laws Plans. Programs, and Regulations

There are no federal laws, plans, programs, or regulations relevant to Baylands population and housing issues.

b. State Laws, Plans, Programs, and Regulations

Housing Element Requirements

California Housing Element Law (Government Code Section 65580, et seq.) requires cities and counties to include, as part of their General Plans, a Housing Element to address housing conditions and needs in the community. The housing element is required to consist of an identification and analysis of existing and projected housing needs and a statement of goals, policies, quantified objectives, financial resources, and scheduled programs for the preservation, improvement, and development of housing. The Housing Element is required to identify adequate sites for housing, including rental housing, factory-built housing, mobile homes, and emergency shelters, and to make adequate provision for the existing and projected needs of all economic segments of the community. Housing Elements are the only General Plan element that must be reviewed and "certified" by a state agency (HCD) as meeting applicable statutory requirements.

c. Regional Plans, Programs, and Regulations

Regional Housing Needs Allocation

State law requires that jurisdictions provide opportunities for production of their fair share of regional housing needs for all economic segments. California Housing Element Law requires the Department of Housing and Community Development (HCD), in consultation with each regional council of governments,[105] to determine each region's existing and projected housing need as a share of the state-wide housing. Each regional council of governments is then required to develop a regional housing allocation (RHNA) plan that quantifies projected housing needs by income group[106] for each city and county in the region. Each city and county must ensure that their current zoning regulations and inventory of land available for the

[105] For purposes of Regional Housing Needs Allocations and General Plan Housing Elements, ABAG is the council of governments for the nine-county Bay Area region.

[106] "Income groups" are defined based on household income in relation to the county's median income and include very low income (less than 50 percent of county median income), low income (50.1 to 80 percent of county median income), moderate income (80.1 to 120 percent of county median income), and above moderate income (more than 120 percent of county median income).

development of housing allow for housing to be built to meet those needs. The RHNA does not stipulate that the units be built, only that the land be available and the appropriate zoning regulations be in place. Housing elements are required to be updated in eight-year "cycles" following timetables adopted by the state. The current, "sixth cycle" RHNA addresses the 2023 to 2031 planning period.

d. City of Brisbane Plans, Ordinances, and Regulations

General Plan

General Plan goals, policies, and other provisions relevant to population, employment, and housing issues raised by the Baylands development are identified below.

Chapter IV: Local Economic Development

This General Plan chapter contains the following relevant policy:

> ***Policy 9:*** Seek fuller employment of Brisbane residents.

Chapter V: Land Use

This General Plan chapter contains the following information:

> ***Table 1*** in this General Plan chapter indicates that the Baylands would house a population of 4,032 to 4,928 residents (1,800 to 2,200 dwelling units). The anticipated employment density for individual commercial and hotel development sites would be 1.23 to 3.22 employees per 1,000 square feet of building area (up to 6.5 million square feet of commercial use and 500,000 square feet of hotel area).

2023–2031 Brisbane General Plan Housing Element

Brisbane's 2023–2031 Housing Element sets forth the City's housing plan to Brisbane's housing needs for all economic segments of the community from 2023 through 2031. The inventory of land for the production of housing in Brisbane for the 6th Cycle (2023–2031) is identified in **Table 4.4-5**.

Table 4.4-5: 2023–2031 City of Brisbane Quantified Objectives by Site

Area	Total Dwelling Units	Income Group			
		Extremely Low, Very Low	Low	Moderate	Above Moderate
Baylands	*1,800*	*145*	*82*	*287*	*1,286*
Parkside	246	159	87	0	0
Central Brisbane	134	1	2	4	131
Accessory DUs	40	12	12	12	4
TOTALS	**2,220**	**317**	**183**	**303**	**1,419**
Regional Housing Needs Allocation (RHNA)	**1,588**	**317**	**183**	**303**	**785**

SOURCE: City of Brisbane, *2023–2031 Housing Element* Table B.7.1, May 18, 2023.

Housing Element programs relevant to the Baylands Specific Plan are as follows.

2.A.1: Maintain existing residential and mixed-use zoning to provide adequate sites to accommodate the 2022–2031 Regional Housing Needs Allocation.

2.A.2: Adopt the Baylands Specific Plan/Zoning to allow for 1,800 to 2,200 housing units, at site densities of at least 20 units per acre, on sites accommodating at least 16 units, to meet the 2023–2031 RHNA, consistent with Government Code Section 65583.2(h).

2.B.1: Through development of the Baylands Specific Plan and implementing development agreements, identify suitable sites for housing for seniors, persons with disabilities or other special needs, and lower-income households in the Baylands subarea. This Program establishes a goal of 514 affordable housing units within the Baylands.

6.A.4: Consistent with the City's Green Infrastructure Plan and Section C.3 of the Municipal Regional Stormwater Permit (MRP), require new residential development to retain and treat stormwater from the site and adjacent rights-of-way.

Municipal Code Title 17, Chapter 17.31, Inclusionary Housing and Density Bonuses

Chapter 17.31 of Brisbane's Zoning Ordinance (Municipal Code Title 17) requires residential development projects with six or more dwelling units to include units that are affordable to lower-income households. The ordinance applies to ownership and rental units and includes a table showing the number of required for-sale units affordable to moderate- and low-income households and the number of required rental units affordable to low- and very-low-income households, based on the total number of units of the Baylands development. The ordinance provides for density bonuses for residential development projects that set aside specified percentages of affordable housing units.

Table 4.4-6 shows the inclusionary housing requirements for residential development.

Table 4.4-6: City of Brisbane Inclusionary Housing Requirements for Residential Development

Total Number of Units in Project	For-Sale Project Units Required to Be Affordable to:		Rental Project Units Required to Be Affordable to	
	Low-Income Households	Moderate-Income Households	Very Low–Income Households	Low-Income Households
0–5	0	0	0	0
6–10	0	1	0	1
11–15	1	1	1	1
16–20	1	2	1	2
21–25	1	3	1	3
26–30	2	3	2	3
31–40	2	4	2	4
41–50	2	5	2	5
51–60	3	6	3	6
61–70	3	7	3	7
71–80	4	8	4	8
81–90	4	9	4	9
91–100	5	10	5	10
101–110	5	11	5	11
111–120	6	12	6	12
121–130	6	13	6	13
131–140	7	14	7	14
141–150	7	15	7	15
151–160	8	16	8	16
161–170	8	17	8	17
171–180	9	18	9	18
181–190	9	19	9	19
191–200	10	20	10	20

SOURCE: City of Brisbane Municipal Code: Chapter 17.31: Inclusionary Housing and Density Bonuses.

4.4.4 SIGNIFICANCE CRITERIA

The following criteria were used to determine the significance of socioeconomic impacts.

Threshold POP-1: The Baylands Specific Plan would cause a significant impact if any of the significant physical environmental impacts identified in this EIR would result from unplanned growth, including:

- **Development in excess of applicable Brisbane General Plan housing or employment projections; or**

- **Provision of infrastructure improvements substantially in excess of those needed to serve regional and Brisbane General Plan housing and employment growth projections.**

Threshold POP-2: **The Baylands Specific Plan would cause a significant impact if it would directly or indirectly displace existing housing or businesses, necessitating construction of replacement housing or commercial/ industrial development outside of the Specific Plan area that would cause one or more significant environmental effects.**

Threshold POP-3: **The Baylands Specific Plan would cause a significant impact if it would directly or indirectly inhibit the City's ability to provide housing for all economic segments of the community as outlined in the City's certified 2023–2031 Housing Element, thereby necessitating provision of additional housing opportunities outside of the Specific Plan area that would cause one or more significant environmental effects.**

Threshold POP-4: **The Baylands Specific Plan would cause a significant impact if it would directly or indirectly result in visible symptoms of physical deterioration of properties or structures caused by a downward spiral of business closures and long-term vacancies that are so prevalent, substantial, and lasting for a significant period of time that they impair the proper utilization of the properties and structures, and the health, safety, and welfare of the surrounding community.**

4.4.5 PROJECT IMPACTS AND MITIGATION MEASURES

a. Impact POP-1: Induce Substantial Unplanned Growth

Methodology for Determining Significance

Analysis of Impact POP-1 uses the following approach to determine the extent to which the Specific Plan could result in substantial unplanned population growth that would cause one or more significant physical changes in the environment.

- Estimate the population, housing, and employment increases that would occur based on the number of residents and employees anticipated within the Baylands at Specific Plan buildout.
- The scale of population and employment that would result from the Specific Plan is then compared with the anticipated population and employment growth projected by the Brisbane General Plan for the Baylands. Any population or employment growth exceeding General Plan projections for the Baylands would be considered to be

unplanned growth and, should such unplanned growth create or exacerbate a significant physical effect, a significant impact in relation to Threshold POP-1 would result.

- The potential for the Specific Plan to generate indirect population or employment growth by removing an existing obstacle to growth or stimulating economic activity such that additional housing, businesses, or services would be needed to support the new economic activity is examined. Any such indirect population or employment growth would be considered to be *unplanned* growth if it would exceed applicable General Plan housing or employment projections. Unplanned growth includes:
    - **Removal of Obstacles to Growth.** Provision of infrastructure in an area where inadequate access or inadequate water, sewer, drainage, or other facilities limit the area's development potential and would remove a physical obstacle to population and employment growth. In areas with limited or no available water supply, providing new or expanded water supply could also remove a physical obstacle to growth.

      Because the applicable threshold focuses on the project's effects on inducing substantial *unplanned* growth, removal of physical obstacles to development of the Baylands in the manner contemplated by applicable General Plan housing or employment projections would be considered to provide for *planned* growth. However, should Baylands development remove physical obstacles that would encourage development in excess of applicable General Plan housing or employment projections, whether within or outside of the Baylands, such additional growth would be considered to be *unplanned*.
    - **Stimulating Economic Activity.** An increase in economic activity in the form of investment and spending by project residents, employees, and businesses can induce growth outside of a project site as the result of:
        - Demand created by Baylands residents, employees, and businesses for new retail and service commercial uses in addition to those offered within the Specific Plan area; or
        - Demand created by Baylands employees and businesses for housing in addition to that offered within the Specific Plan area.
    - Should Baylands development stimulate economic growth that would encourage development in excess of applicable General Plan housing or employment projections, whether within or outside of the Baylands or the City of Brisbane, such additional growth would be considered to be *unplanned*.
- If any of the significant unavoidable impacts identified in Section 4.19, *Significant Unavoidable Effects*, of this EIR would be caused by *unplanned* growth resulting from implementation of the Baylands Specific Plan, a significant impact in relation to Threshold POP-1 would be identified.

Impact Assessment

Direct Impacts

The Specific Plan's residential and commercial development program is consistent with the Brisbane General Plan (1,800 to 2,200 dwelling units, up to 6.5 million square feet of commercial use, and an additional 500,000 square feet of hotel). Thus, the estimated residential population of up to 4,905 and the approximately 19,480 jobs[107] within the Baylands identified in **Table 4.4-7** that would result from Specific Plan development would also be consistent with the General Plan. The 2,200 dwelling units proposed by the Baylands Specific Plan represents 3.2 percent of the household growth and 34.1 percent of the employment growth projected by Plan Bay Area 2050 for North San Mateo County.[108]

Table 4.4-7: Estimated Baylands Resident Population and On-Site Employment

Proposed Use	Generation Factor (Residents per d.u.; Non-Residential s.f. per employee)	Estimated Population/Jobs
Residential	2.23	**4,905 residents**
Non-Residential		**19,480 jobs**
Retail	580	176 jobs
Office	310	1,964 jobs
Biotech Campus	350	9,365 jobs
Low Intensity Commercial	350	7,145 jobs
Hotel	—	800 jobs
Renewable Energy Generation/Storage	—	30 jobs

SOURCE: Economic & Planning Systems, Inc, *Fiscal Impact Analysis of The Baylands Specific Plan*, January 2022; Fehr & Peers, 2024.

Indirect Impacts

Removal of Obstacles to Growth Outside of the Baylands

Currently, Brisbane's Individual Supply Guarantee (ISG) from the San Francisco Public Utilities Commission (SFPUC) would not be sufficient to provide water is normal, dry, and multiple dry years for existing and future customers in the City. As documented in Chapter 6, *Growth Inducing Effects*, **Table 6-3** through **Table 6-5** indicate that the proposed Cal Water service area expansion would eliminate projected future water supply shortfalls in normal years and substantially reduce water shortfalls during single dry and multiple dry year conditions for buildout of the Brisbane General Plan for areas outside of the Baylands, Beatty, and Sierra Point

[107] Relocation of existing Fire Station No. 81 and conversion of the existing Bayshore School to an elementary school would not increase employment. Projected employment at the Baylands middle school and new fire station is included in the projected 19,480 jobs that would be created within the Baylands.

[108] "North San Mateo County" is defined as the cities of Brisbane, Colma, Daly City, Pacifica, South San Francisco, Millbrae, San Bruno, and a portion of Burlingame, along with adjacent unincorporated areas.

areas. In addition, the proposed Cal Water service area expansion would provide adequate water supply for the Baylands Specific Plan, as well as for new development within Sierra Point (EKI 2025). By providing adequate water supply, the Specific Plan project would remove a major obstacle to growth within Brisbane.

As discussed in Chapter 3, *Project Description*, water facilities proposed as part of the Specific Plan would provide recycled water for non-potable purposes not only for the Baylands but also for uses within the City of South San Francisco. Because recycled water is not currently available within South San Francisco, provision of recycled water from the Baylands would allow the existing potable water supply available to the City of South San Francisco to serve a greater amount of development than could be served in the absence of a recycled water supply.[109]

Baylands sewer, drainage, and utilities infrastructure would be sized to serve Baylands development such that the project's infrastructure improvements would not be substantially in excess of those needed to serve regional and Brisbane General Plan housing and employment growth projections. Baylands roadways would also be sized to serve Baylands development and address the effects of increased vehicular travel that would result. Major transportation improvements that are part of bi-county transportation planning efforts, such as the Geneva Avenue extension and freeway interchange improvements, are being sized in accordance with regional growth projections.

Stimulation of Economic Activity

The estimated 19,480 jobs that would be created within the Baylands as the result of Specific Plan buildout and associated project components would be associated with approximately 14,537 households, based on the projected average number of workers per household (1.34) for the nine-county San Francisco Bay Area in 2050 (MTC/ABAG 2021).

As indicated in the 2020 Census, 59.8 percent of Brisbane residents were employed within San Mateo County. Although the 2020 Census (United States Census Bureau 2021) does not report the number of Brisbane residents employed within Brisbane, past demographics reports indicate that about 15 percent of employed Brisbane residents held jobs in the City, Brisbane residents working in the City held about five percent of the jobs in Brisbane, and residents of other San Mateo County cities and San Francisco held most of Brisbane's jobs (City of Brisbane 2018). Thus, it is reasonable to project that the work force for increased Baylands employment would primarily be drawn from the residents of San Francisco and San Mateo counties.

The degree to which Baylands housing would meet the needs of Baylands employees depends on a variety of factors, including types of employment, price of housing, and where specifically

[109] See Section 4.16, *Utilities, Service Systems, and Water Supply*, and Chapter 6, *Growth Inducing Effects*, for additional discussion of the Baylands water supply in relation to planned development in Brisbane and South San Francisco.

new employees at Baylands would be drawn from, for which little information is available at this point in the planning process. However, as discussed in the analysis of Threshold POP-3, compliance with Brisbane inclusionary housing requirements provide an array of dwelling units in the Baylands that would be affordable to households of different income levels, thereby increasing the opportunity for on-site workers to also live on-site.

The urban decay study prepared for the Baylands by ALH Urban and Regional Economics analyzed retail spending by Baylands households at brick-and-mortar stores as well as retail spending by on-site Baylands employees (ALH 2023). The study indicates that Baylands residents would generate enough spending to support up to approximately 215,000 square feet of retail space.[110] The Baylands Urban Decay Study also analyzed daytime retail spending by Baylands employees and concluded that Baylands employees would generate enough spending to support up to approximately 509,000 square feet of restaurant, grocery, and other retail space. Based on an estimated 92,000 square feet of retail space to be provided within the Baylands, the Specific Plan's 4,905 residents and 19,480 on-site employees would generate retail sales capable of supporting 801,175 square feet of retail floor space as indicated in **Table 6-1**. As indicated in the Baylands Urban Decay Study, there are currently 22 development projects providing retail space that are either under construction (147,050 s.f.), approved (793,000 s.f.), or undergoing review (3,700 s.f.) in the Baylands retail market area, which consists of the City of Brisbane, the southern portion of San Francisco near the Brisbane city limits, the eastern portion of Daly City, and the northern portion of South San Francisco. As a result of these projects and future development of other lands zoned for retail development, Baylands development would not likely result in unplanned growth of retail development.

Significance Conclusion for Impact POP-1

The growth in employment and households resulting from Baylands development is consistent with the Brisbane General Plan (1,800 to 2,200 dwelling units, 6.5 million square feet of commercial use, and an additional 500,000 square feet of hotel use). Thus, direct population and employment growth associated with the Baylands Specific Plan would constitute *planned* rather than *unplanned* growth and would not represent an impact in relation to Threshold POP-1.

Although the Baylands Specific Plan would remove water supply as an obstacle to growth within the City of Brisbane, the additional water supply available to the City would be used to accommodate General Plan buildout. In addition, recycled water would be delivered to existing uses within South San Francisco and the resulting expanded potable water supply would be

[110] The Baylands urban decay study projects retail spending by Baylands households for home furnishings and appliances, building materials and garden equipment, food and beverage sales, clothing and accessories, general merchandise stores, food services and drinking places, and "other" retail. By applying industry standard sales per square foot figures, the report estimates the total amount of supportable square footage based on an assumed 15 percent vacancy rate. See Exhibit 18 of the urban decay study in EIR Appendix C for details.

used to reduce projected dry year deficits for projected future development. Thus, the resulting growth would be considered to be *planned* rather than *unplanned* growth.

Thus, the impact is less than significant.

b. Impact POP-2: Need for Replacement Housing or Commercial/Industrial Buildings

Methodology for Determining Significance

Impact POP-2 addresses the physical environmental effects of displacing existing housing or businesses within the Baylands, necessitating construction of replacement housing or commercial/industrial development outside of the Baylands. Consistent with CEQA Guidelines Section 15131(a), this analysis considers whether housing or businesses that might be displaced would require construction of new structures elsewhere; however, the significance of Impact POP-2 is based on whether the displacement of people or housing would lead to one or more significant physical environmental effects due to the construction of replacement housing or commercial/industrial structures outside of the Baylands.

The methodology used to make this determination is to determine:

- The extent to which existing housing or businesses would be displaced by Baylands development and infrastructure.
- Whether housing or businesses displaced by Baylands development and infrastructure would require development of replacement housing or business properties.
- Whether any needed replacement housing and/or business structures would result in significant environmental effects.

Impact Assessment

Displacement of Housing

There is no existing housing within the Specific Plan area. In addition, Baylands infrastructure to be constructed off-site would occur within existing roadway rights-of-way, not on parcels containing existing housing. Thus, the Specific Plan would not displace any existing housing.

Displacement of Businesses within the Baylands Specific Plan Area

The applicant has stated that existing leases for all businesses on lands it owns will lapse or be terminated prior to site grading, including approximately 231,400 square feet of industrial building area along Industrial Way along with interim and temporary commercial and storage

uses along Tunnel Avenue. Commercial office use of the existing building at 140 Valley Drive would be displaced by relocation of the existing Fire Station No. 81.

Businesses within the Baylands Specific Plan Area That Would Not Be Displaced and Would Remain in Their Current Location

Whereas site grading would cover the entirety of the Baylands Specific Plan area, Baylands site grading would not displace certain existing uses within the Specific Plan area,[111] including:

- Recology uses along the east side of Tunnel Avenue:
- Golden State Lumber's main facility along the east side of Tunnel Avenue;
- Kinder Morgan Tank Farm;
- Machinery & Equipment Company; and
- Bayshore Sanitary District Pump Station.

The existing Brisbane fire station would remain in its current location until such time as the proposed station on Valley Drive is ready for operation.

While Baylands development would not displace Golden State Lumber's main facility, Baylands grading and development would displace an area that is currently leased by the applicant to Golden State Lumber for loading, unloading, and temporary storage of lumber shipped by rail.[112] This area, which includes a Southern Pacific rail spur and a laydown yard, is designated in the Specific Plan as "Sustainable Infrastructure." Because Golden State Lumber currently receives approximately 30 percent of its stock by rail, should the applicant decline to retain Golden State Lumber's ability to continue using the leased property, the company would lose its ability to receive and ship lumber by rail.[113] A substantial economic effect on the business would result from such a loss, adversely affecting the lumber yard's ability to remain in its current location.[114]

The **Mission Blue Nursery**, which leases its current site from the applicant, is proposed to be relocated to Icehouse Hill as part of Specific Plan development. The impacts of this relocation

[111] The location of these uses is depicted in Draft EIR **Figure 3-2**.

[112] Golden State Lumber's main sales building, offices, outdoor storage area, and on-site parking are located on the east side of Tunnel Avenue outside of (but surrounded by) the Specific Plan area (see Draft EIR **Figure 3-2**).

[113] Because lumber is shipped on "center beam" rail cars, loading and unloading lumber requires access to both sides of rail cars. In the absence of the leased property, Golden State Lumber would only have access to the side of rail cars facing Tunnel Avenue. In addition, the company would lose its current laydown yard and would not be able to temporarily stage and store lumber adjacent to its rail spur.

[114] Because Golden State Lumber contributes more than 20 percent of Brisbane's sales tax revenue, it is a vital part of the City of Brisbane's economic health.

are addressed as part of the overall Baylands development through Draft EIR Chapter 4, *Environmental Setting, Impacts, and Mitigation Measures*.

As stated in Specific Plan Section 7.3.5, existing buildings on these sites are proposed to remain at their current elevations with property access provided to adjacent roadways at these buildings' existing grades, some of which are below the future 100-year storm event hydraulic grade line elevation with tidal flow and estimated sea level rise through the Year 2100.

Baylands-related infrastructure adjacent to off-site businesses would be located within existing roadway rights-of-way. The Specific Plan provides for maintaining existing grades adjacent to existing businesses located near or within the Specific Plan area. Although, there are no specific requirements to maintain access to these businesses at all times during construction of Baylands infrastructure, maintaining such access is a standard City development requirement.

Potential Relocation Sites for Displaced Businesses and Related Physical Environmental Impacts

Industrial Businesses within the Baylands Specific Plan Area

The NAI Northern California November 2022 Industrial Market Report for the San Francisco industrial market area reports a total of 96,288,682 square feet of existing industrial building area within San Francisco and San Mateo counties, 9.8 percent of which was either vacant or occupied but available for sale or lease (NAI Northern California/Costar 2022). As of November 2022, over 5.5 million square feet of flex industrial space were also under construction. The November 2022 Industrial Market Report indicated the availability of industrial space in proximity to Brisbane as shown in **Table 4.4-8**.

Table 4.4-8: Industrial Building Availability

Market Area	Total Industrial Building Area (s.f.)	Existing Vacancy Rate		Vacancy Rate after Relocation of Baylands Industrial Businesses	
		Square Footage	Percent	Square Footage	Percent
Brisbane/Daly City	6,491,000	749,255	10.8%		
Bayview/Hunters Point	7,492,000	491,752	6.6%		
South San Francisco	21,498,000	1,395,944	6.5%		
TOTAL	**35,481,000**	**2,636,984**	**7.4%**	**2,405,584**	**6.8%**
SAN FRANCISCO-SAN MATEO COUNTY TOTAL	**96,289,000**	**6,355,055**	**6.6%**	**6,123,655**	**6.4%**

SOURCE: NAI Northern California/Costar, 2022.

As indicated in **Table 4.4-8**, there is adequate existing vacant building area to accommodate the approximately 231,400 square feet of existing industrial uses within the Specific Plan area that would be displaced by Baylands development. As of November 2022, over 6.3 million s.f. of industrial building area was vacant within San Francisco and San Mateo counties, over 2.6 million s.f. of which was located within Brisbane and adjacent communities. The 231,400 square

feet of industrial uses that would be displaced from the Baylands represents 8.9 percent of the vacant industrial space within Brisbane and adjacent communities and 3.7 percent vacant industrial space within San Francisco and San Mateo counties. As shown in **Table 4.4-8**, relocation of 231,400 square feet of industrial uses from the Baylands to other locations within Brisbane and adjacent communities would retain a healthy vacancy rate. Thus, construction of new industrial buildings to accommodate the industrial businesses that will be displaced from the Baylands would not likely be necessary, as the region contains a sufficient amount of vacant industrial building area to accommodate the existing industrial uses that would be displaced by Baylands development.

Because construction of new buildings to accommodate industrial businesses displaced from the Baylands would not be necessary, construction impacts associated with displacement would be limited to interior improvements. Impact analyses undertaken for the EIR address the entirety of the proposed 2,200 dwelling units, 6.5 million square feet of commercial, and 500,000 square feet of hotel use within the Baylands. As a result, the 231,400 square feet of industrial uses to be dislocated from the Baylands are anticipated to move to other locations, most likely to sites nearby within San Francisco or San Mateo County.

Golden State Lumber Laydown Yard

Golden State Lumber's laydown yard has three locational requirements:

- Rail-served site with access to both sides of center beam rail cars;
- Adjacent to the Golden State Lumber building and main storage area; and
- Sufficient size for temporary lumber storage and staging.

The only option for relocating Golden State Lumber's existing laydown yard without also relocating its entire facility would be to extend the existing siding used by Golden State Lumber across Tunnel Avenue to a new laydown yard site immediately south of Golden State Lumber's existing main Tunnel Avenue facility. Such an area would have the capacity to simultaneously receive and unload two rail cars with an approximate 2-acre new lay-down area to replace the area that would be displaced by Specific Plan development (see **Figure 4.4-3**). This area is, however, designated for Low Density Commercial use in the Specific Plan. Whether Golden State Lumber could reach agreement with the applicant to move their lease is unknown.

Should Golden State Lumber and the applicant reach an agreement to relocate the existing laydown yard, the resulting physical environmental effects would be similar to those of the Specific Plan. Extending the existing siding across Tunnel Avenue would require temporary partial or complete closure of the roadway during construction, which would adversely affect emergency response along Tunnel Avenue. Implementation of this concept would mean that Tunnel Avenue traffic would be disrupted when rail cars would be moved to and from the new laydown area, adversely affecting emergency response; however, movement of lift trucks

hauling pallets of lumber across Tunnel Avenue would be eliminated. Should the existing siding across Tunnel Avenue be installed, the City would require standard signage, warning lights, and crossing gates.

Figure 4.4-3: Alternative Golden State Lumber Laydown Yard and Rail Extension

Significance Conclusion for Impact POP-2

Physical environmental impacts related to displacement of housing and business will be less than significant for the following reasons:

- There is no existing housing within the Baylands.
- All off-site infrastructure associated with Baylands development will be located within existing roadway rights-of-way.
- Although approximately 231,400 square feet of existing industrial businesses within the Baylands and the existing business at 140 Valley Drive would be displaced as of November 2022 by Baylands grading and development, there is more than 2.6 million square feet of vacant industrial space within Brisbane and adjacent communities and more than 6.3 million square feet of vacant industrial space within San Francisco and San Mateo counties. As a result, displacement of industrial businesses from the Baylands would not necessitate new construction of replacement industrial development for which significant physical environmental impacts would occur.

- Operational impacts of businesses relocating from the Baylands would continue to be generated at their new locations rather than within the Baylands. Impacts of the 231,400 square feet of existing industrial businesses within the Baylands and at 140 Valley Drive that would relocate are small in relation to the environmental baseline for San Francisco and San Mateo counties and would be spread out into various locations.
- Existing grades and roadway access to business adjacent to or completely surrounded by the Specific Plan area would be maintained at all times through Baylands development such that there would be no displacement of these existing businesses, and replacement development is not required.
- Baylands development would displace Golden State Lumber's laydown area and its ability to receive and ship lumber by rail, adversely affecting its business operations, the resulting adverse effects would be economic and therefore does not constitute a physical environmental effect as defined by CEQA. Such adverse economic effects would be addressed through the Baylands' planning review process.

c. Impact POP-3: Housing for all Economic Segments of the Community

Methodology for Determining Significance

Threshold POP-3 addresses the extent to which the Baylands Specific Plan might facilitate or impair the City's ability to provide housing for all economic segments of the community as defined by the City's RHNA numbers for very low-, low-, moderate- and above moderate-income households.

As shown in **Table 4.3-1**, the Baylands Specific Plan encompasses 80.1 percent of the City's total available land inventory for the production of housing identified in its 2023-2031 Housing Element. **Table 4.3-1** also demonstrates that Brisbane does not have a sufficient inventory of land available for housing production to meet its 2023-2031 Housing Element need in the absence of the Baylands Specific Plan.

The methodology used to analyze this impact is as follows:

1. Analyze residential development densities proposed by the 2025 Specific Plan and affordability of these densities for each economic segment of the community. If it is determined that the Specific Plan would facilitate housing for all economic segments of the community as outlined in the City's certified 2023–2031 Housing Element, no further analysis would be needed.
2. Should the Specific Plan impair the City's ability to provide housing for all economic segments of the community as outlined in the City's Housing Element, undertake further analysis to identify whether additional sites for housing would be required

outside of the Baylands and whether development of such sites would result in significant physical environmental impacts.

Impact Assessment

Ability to Provide Housing for All Economic Segments of the Community

Specific Plan's Relationship to the City's Housing Inventory

As indicated in **Table 4.3-1**, the Baylands Specific Plan represents approximately 81 percent of the land inventory identified in the Housing Element for the production of housing. As shown in Table 5-1 of the City's 2023–2031 Housing Element, Baylands development is anticipated to provide 55.7 percent of the City's quantified objective for very low-income housing, along with 95.0 percent of the City's quantified objectives for moderate- and above moderate-income housing.

Pursuant to Government Code Sections 65583.2(f) and 65583.2(h), Brisbane is classified as a "suburban jurisdiction," meaning that land zoned at densities greater than 20 dwelling units per acre on sites that can accommodate at least 16 dwelling units per site can facilitate affordable housing development.

The Specific Plan's proposed 2,200 dwelling units on 53.6 acres equates to approximately 41 dwelling units per acre. The Housing Element projects 514 below-market units within the Baylands, representing 28.6 percent of the minimum number of housing units permitted within the Baylands (1,800) and 23.4 percent of the maximum number of units permitted and currently proposed for the Baylands (2,200).

Significance Conclusion for Impact POP-3

The Specific Plan provides sufficient land for housing at appropriate densities to meet Housing Element-quantified objectives for the production of housing to meet the needs of all economic segments of the community as outlined in the City's certified 2023–2031 Housing Element. The Baylands Specific Plan would therefore have a less than significant impact related to directly or indirectly inhibiting the City's ability to provide housing for all economic segments of the community.

d. Impact POP-4: Urban Decay

Methodology for Determining Significance

Urban decay occurs when a downward spiral of business closures and multiple long-term business vacancies, directly or indirectly result in visible symptoms of physical deterioration[115] to properties or structures that is so prevalent, substantial, and lasting for a significant period of time that it impairs the proper utilization of the properties and structures, or the health, safety, and welfare of the surrounding community. To determine whether new retail or office/life science development within the Baylands would cause a downward spiral of business closures and multiple long-term business vacancies that could, directly or indirectly, result in visible symptoms of physical deterioration, an urban decay analysis was undertaken for the Baylands (see Appendix C and the analysis below).

Urban Decay

In September 2019, the Court of Appeal of the State of California, 3rd Appellate District in *Chico Advocates for a Responsible Economy v. City of Chico* (2019) 40 Cal.App.5th 839 (*CARE*) upheld the definition of urban decay set forth in the Chico Walmart Expansion Project Draft EIR. The Chico EIR defined urban decay as "among other characteristics, visible symptoms of physical deterioration that invite vandalism, loitering, and graffiti that is caused by a downward spiral of business closures and long-term vacancies. This physical deterioration to properties or structures is so prevalent, substantial, and lasting for a significant period of time that it impairs the proper utilization of the properties and structures, and the health, safety, and welfare of the surrounding community" (*CARE, supra,* at p. 849).

Typically, urban decay analyses are primarily prepared for retail development, or the retail components of large-scale mixed-use projects. Over time, some environmental impact reports have also conservatively extended the urban decay analysis to other land uses. Such is the case for the Baylands urban decay analysis, which includes office/life science space in addition to the more common analysis of retail space.

The urban decay analysis undertaken for the Baylands is not intended to determine the extent to which demand for retail or office/life science uses does or does not exist, but rather to assess what impact such use could have on the *existing* real estate base for these uses assuming they are built within the Baylands. The urban decay analysis undertaken for the Baylands focused on how a court described the phenomenon, as "a chain reaction of store closures and long-term vacancies, ultimately destroying existing neighborhoods and leaving decaying shells in their wake" (*Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4th 1184, 1204). As with other socioeconomic impacts addressed in this section of the EIR, the following analysis does not consider adverse economic impacts to constitute urban decay (CEQA Guidelines Section 15131.) For example, increased retail vacancies or vacant office buildings are not considered urban decay, even if such vacancies would occur over a relatively long period of time. The urban decay analysis

[115] "Physical deterioration" can be identified by such features as abandoned buildings, boarded doors and windows, parked trucks and long-term unauthorized use of the properties and parking lots, extensive or offensive graffiti painted on buildings, dumping of refuse or overturned dumpsters on properties, dead trees and shrubbery, and uncontrolled weed growth.

undertaken for the Baylands examined whether there was sufficient market demand to support Specific Plan development without affecting existing office/life science properties or retailers so severely to lead to a downward spiral toward decay of the existing physical environment.

The Baylands urban decay analysis that follows is based on a detailed technical analysis undertaken by ALH Urban and Regional Economics[116] that included the following tasks:

- Office/Life Science Uses
    - Identify a competitive office/life science market area for the Baylands office/life science component and assess existing conditions, including the amount and age of existing inventory along with demand, rental rates, market conditions, development and ownership trends, and other economic health indicators for office/life science space in the Baylands market area.
    - Estimate demand for office/life science space in the market area.
- Retail Uses
    - Identify a retail market area from which the bulk of the Project's retail demand is estimated to originate and assess existing conditions.
    - Estimate existing and future retail market area demand.
    - Assess Project impacts by land use.
    - Identify and assess cumulative project impacts by land use.
- Identify urban decay implications of the Baylands Office/Life Science and retail components.

For the Specific Plan's office/life science space or retail space to have a significant impact, Baylands office/life science space or retail development would need to draw tenants away from existing buildings without the potential for that space to be re-tenanted, thus increasing the vacancy rate to such an unhealthy level that visible symptoms of physical deterioration of vacant buildings and their sites would occur. Proposed uses other than office/life science space and retail space are thus not addressed in the Baylands urban decay analysis.

Impact Assessment

The Baylands Specific Plan, estimated to total nearly 6.4 million square feet of occupied office space, would represent a 40.5 percent increase in the existing Brisbane/Daly City local market inventory. The first phase of Baylands development represents about 21 percent of the market inventory of San Mateo County.

[116] The full urban decay study for the Baylands is presented in Appendix C.

Office/Life Science Space

The Specific Plan would add 6,397,800 square feet of new office/life science space to the existing 15.8-million-square-foot inventory in the local Brisbane/Daly City market area, a 40.5 percent increase. Considering the 61.1-million-square-foot countywide inventory of office and life science space, the Specific Plan represents a 10.5 percent increase in San Mateo County's supply.

The San Mateo County economy as a whole is projected to experience demand for office/life science space in the near- and long-term future. For example, the demand projected from 2023 to 2025 totals 2.3 million square feet, or close to 1.0 million square feet per year. Over the next 5-year period, the incremental space demand is forecasted at 2.9 million square feet. At an average annual estimated demand of 645,683, the Specific Plan's office/life science space would require absorption of approximately 10 years' demand for office/life science space in San Mateo County. This is on par with the Specific Plan's proposed development time horizon.

For the Specific Plan's office/life science space to have a negative impact on the market, it would need to draw tenants away from existing buildings without the potential for that space to be re-tenanted, thus increasing the vacancy rate to an unhealthy level, characterized by multiple long-term vacancies. There are major factors that suggest these circumstances are unlikely to happen.

The current availability rate is low in the office/life science market area, at 8.1 percent for office and life science combined, which is favorable in contrast to other nearby areas. For example, the vacancy rate in San Francisco's downtown office market is near 30 percent. Future employment-based demand projections suggest that existing companies will be growing, and other new tenants would be interested in locating within the competitive office/life science market area. At worst, interception of this demand by the Project would slow development and absorption of the competitive office/life science buildings, but not create widespread, multiple long-term vacancies.

Development of the Specific Plan area itself will occur in phases and be driven by market conditions and tenant demand. To the extent that demand for Baylands office/life science buildings is less robust than expected, construction would slow down to better align with demand. This may mean that development timing of later phases would be pushed further out into the future.

The existing inventory of space in Brisbane and South San Francisco is relatively new, with many buildings less than 20 to 25 years old. Additionally, the market has a highly concentrated ownership pattern, with large, experienced companies controlling most of the space. This suggests that these landlords have the wherewithal to successfully maintain, market, and re-tenant large vacancies should tenant movement to the Baylands occur.

In conclusion, development and absorption of the proposed 6,397,800 square feet of Baylands office/life science space would not result in a sustained negative impact on the existing office/life science base in the competitive market area. Implementation of the Baylands Specific Plan would not cause a downward spiral of business closures and multiple long-term vacancies of office/life science spaces that would lead to urban decay.

Retail Space

The Specific Plan includes several components that will generate new demand for retail, including Baylands residents, employees, and hotel guests. **Table 4.4-9** compares projected annual retail sales of Baylands residents, employees, and hotel guests at brick and mortar shops with projected retail sales of the anticipated 91,980 square feet of occupied Baylands retail space.

Table 4.4-9: Retail Demand Generated by the Baylands Market Area

Retail Demand Characteristic	Total Spending
Annual brick and mortar spending by Baylands residents	$91,504,898
Annual daytime spending by Baylands employees and hotel guests	$207,441,271
TOTAL ANNUAL BAYLANDS-GENERATED RETAIL SPENDING	**$298,946,169**
Retail sales generated by the proposed 91,980 s.f. of retail use within the Baylands	$33,100,000

SOURCE: ALH Urban & Regional Economics, *The Baylands Urban Decay Analysis*, July 2023.

As identified in **Table 4.4-9**, Baylands development would generate approximately $298.9 million in brick-and-mortar spending by Baylands residents and daytime spending by Baylands employees and hotel guests annually. In comparison, $33.1 million in retail sales would be generated annually by 91,980 square feet of Baylands retail space, representing approximately 11.5 percent of the retail sales generated by the Specific Plan's residents, employees, and hotel guests. Thus, Baylands residents, employees, and hotel guests would generate approximately $265.8 million in retail sales to backfill any retail sales that might be diverted to the Baylands from offsite businesses. The Baylands Specific Plan would therefore not cause a downward spiral of business closures and multiple long-term vacancies of retail spaces.

Significance Conclusion for Impact POP-4

Baylands development would not result in urban decay and impacts would be less than significant for the following reasons:

- Development of the Specific Plan will occur in phases and be driven by market conditions and tenant demand. To the extent that demand for Baylands office/life science buildings is less robust than expected, construction would slow down to better align with demand. This would mean that development timing of later phases would be pushed further out into the future.

The existing inventory of space in Brisbane and South San Francisco is relatively new, with many buildings less than 20 to 25 years old. Additionally, the market has a highly concentrated ownership pattern, with large, experienced companies controlling most of the space. This suggests that these landlords have the wherewithal to successfully maintain, market, and re-tenant large vacancies should tenant movement to the Baylands occur.

- Baylands residents, employees, and hotel guests would generate approximately $265.8 million more in retail sales at full buildout than retail sales at Baylands businesses. Thus, even if Baylands development would divert some sales away from existing retailers, Specific Plan development would generate substantially greater new retail sales to backfill any diverted sales.

Impact POP-4 is therefore less than significant.

4.4.6 REFERENCES – POPULATION AND HOUSING EFFECTS

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4.5 AESTHETIC AND VISUAL RESOURCES

4.5.1 INTRODUCTION

a. Overview

This section describes the existing visual setting for the Baylands Specific Plan and focuses on the visual changes that would be seen from public viewpoints, including scenic vistas, views of distinctive visual landmarks and scenic resources, and potential environmental effects of new sources of light and glare.

This EIR recognizes that assessing whether the 2025 Specific Plan project would result in comparatively better (substantially improved) or worse (substantially degraded) aesthetic quality is largely subjective and that the reaction of different viewers to the same visual setting and changes in aesthetic conditions will vary.

Public Resources Code Section 21099(a): Analysis of Aesthetic Impacts

Senate Bill (SB) 743 was codified within CEQA as Public Resources Code Section 20199 et seq. and states that "Aesthetic and parking impacts of a residential, mixed-use residential, or employment center on an infill site within a transit priority area shall not be considered significant impacts on the environment" (Public Resources Code Section 21099(d)(1)).

While the Baylands would meet the Public Resources Code Section 20199(a) definition of an infill site and the existing Bayshore Caltrain Station meets the definition of a major transit stop, only a portion of the Specific Plan area is located within a transit priority area (within ½ mile of a transit stop). Therefore, aesthetic impacts of the Baylands Specific Plan are not excluded from CEQA analysis pursuant to Public Resources Code Section 21099(d)(1) and are addressed in this EIR.

The assessment of visual resources impacts in this section is therefore qualitative and focuses on the physical changes to existing visual elements or features of the site and surrounding area, such as blockage of existing scenic vistas or physical damage to scenic features that would result from Specific Plan development, as well as consistency with provisions of Brisbane's General Plan and Municipal Code addressing scenic and visual quality. As permitted by state law, the Specific Plan does not identify the precise location, height, setbacks, design, and shape of each on-site building. Instead, the Specific Plan establishes guidelines for future architectural design of site-specific development projects, which are reviewed for consistency with the City's required findings for a design permit during the development review process.

b. Definitions

Aesthetic or visual resources include a combination of numerous elements, such as landforms, vegetation, water features, urban design, and/or architecture, that impart an overall visual impression that is pleasing to, or valued by, its observers. Factors important in describing the aesthetic resources of an area include scenic resources, scenic vistas, and visual character. Together, these factors not only describe the intrinsic aesthetic appeal of an area, but also

communicate the value placed upon a landscape or scene by its observers. Aesthetic resources include:

- **Scenic resources**, which are visually significant hillsides, ridges, and water bodies that are critical in shaping an area's visual character and scenic identity, whether positively or negatively. Relevant scenic resources include natural features such as Icehouse Hill, the Brisbane Lagoon, San Bruno Mountain and its adjacent ridgelines, and San Francisco Bay.
- **Scenic vistas**, which include expansive/panoramic views of large geographic areas and important visual features, such as views of striking or unusual natural terrain or unique urban or historic features as seen from public viewing areas. Relevant scenic vistas include public views across the Baylands of San Francisco Bay and the Brisbane Lagoon, Icehouse Hill, and San Bruno Mountain and the adjacent ridgeline as viewed from (1) public areas within Brisbane, San Francisco, and Daly City and (2) the US 101 freeway.
- **Visual character**, which broadly describes the unique combination of aesthetic elements and scenic resources that characterize a particular area. An area's visual character can be qualitatively assessed considering the overall visual impression or attractiveness created by the particular landscape characteristics. In urban and suburban settings, these characteristics largely include land use types and their general level of maintenance; urban landscaping and design; architectural design; topography; and the visual prominence of natural and developed open spaces in relation to buildings, parking areas, streets, and above-ground infrastructure.

Correlated color temperature or **color temperature** is a specification of the color appearance of the light emitted by a light source, measured in Kelvin (K). The scale ranges from 1,000K (candlelight) to 10,000 (cold, sky blue) and is most commonly found between 2700K and 6500K. The lower end of the scale as a "warmer" feel with a redder or more orange hue to the color. The higher end of the scale has a "cooler" feel and has a more white or blue hue.

Foot-candle is a unit of measure of the intensity of light falling on a surface equal to one lumen per square foot. Although the foot-candle measurement is considered obsolete in some scientific circles, it is nevertheless commonly used because many existing light meters are calibrated in foot-candles. Moonlight produces approximately 0.01 foot-candles, while sunlight can produce up to 10,000 foot-candles. The general benchmarks for light levels are shown in **Table 4.5-1**.

Form refers to the unified mass or shape of an object that often has an edge or outline and can be defined by surrounding space. For example, a high-rise building would have a highly regular, rectangular form whereas a hill would have an organic, mounded form.

Table 4.5-1: Outdoor Lighting Levels

Lighting Levels	
Outdoor Light	**Foot-Candles**
Direct Sunlight	10,000
Full Daylight	1,000
Overcast Day	100
Dusk	10
Twilight	1
Deep Twilight	0.1
Full Moon	0.01
Quarter Moon	0.001
Moonless Night	0.0001
Overcast Night	0.00001
Gas Station Canopies	25–30
Typical Street Light	1–5

SOURCES: Musco Lighting 2012; The Engineering ToolBox 2013.

Fully Shielded means a light fixture constructed and installed in such a manner that all light emitted, either directly from the lamp or a diffusing element, or indirectly by reflection or refraction from any part of the fixture, is projected below the horizontal plane (from the bottom of the lamp).

Glare is an intense and blinding light that reduces visibility; a light within the field of vision that is brighter than the brightness to which the eyes are adapted to cause annoyance, discomfort, or loss of vision. Glare can be uncomfortable and/or physically disabling and can be experienced as a momentary flash (often referred to as "glint") or a longer phenomenon.

Illuminance is the amount of light present on a surface or plane, typically expressed in a horizontal plane (i.e., on the ground) or in a vertical plane (i.e., on the side of a building).

Infill site, as defined in Public Resources Code Section 21099(a)(4) means a lot[117] located within an urban area that has been previously developed, or on a vacant site where at least 75 percent of the perimeter of the site adjoins, or is separated only by an improved public right-of-way from, parcels that are developed with qualified urban uses.

Intact/Not Intact describes the extent to which views are free from visual encroachment in the natural and built landscape by incompatible elements.

[117] "Lot" is defined in Public Resources Code Section 21099 (a)(5) as "all parcels utilized by the project."

Landscape Character Unit refers to geographic areas that have similar visual features, a generally homogeneous visual character, and often, a single viewshed that is sometimes referred to as an "outdoor room."

Light trespass, light spillage is light falling beyond the area intended to be illuminated such as adjacent properties or habitat areas.

Lumen is a measurement of the perceived power of light emitted from a light source. It can be informally thought of as a measure of the total amount of visible light in some defined beam or angle or emitted from some source.

Luminaire (light fixture) is a complete lighting unit consisting of a lamp or lamps and ballast(s) (when applicable) together with the parts designed to distribute the light, to position and protect the lamps, and to connect the lamps to the power supply.

Representative viewpoints are specific locations where views of a project site are available from a public vantage point (e.g., a public roadway, park, or trail).

Sky glow is the light reflecting into the night sky that reduces visibility of stars and is a cumulative effect of numerous night lighting sources within a community and metropolitan region. Sky glow includes both natural sources, such as moonlight, and human sources. Sky glow from human sources is caused by light that is either emitted directly upward by luminaires (lighting fixtures) or reflected from the ground, producing a luminous background that has the effect of reducing the apparent darkness of the sky and reducing one's ability to view the stars. Sky glow is highly variable depending on immediate weather and atmospheric conditions, amount of light directed skyward, and the direction from which it is viewed.

Specular surface refers to a building façade or roof surface that reflects light in a mirror-like fashion.

String lights are light sources connected by free-strung wires or inside of tubing resulting in several or many points of light.

Transit Priority Area, as it is defined in Public Resources Code Section 21099(a)(7), means an area within one-half mile of an existing or planned major transit, if the planned stop is scheduled to be completed within the planning horizon included in a Transportation Improvement Program or applicable regional transportation plan. The portion of the Baylands within one-half mile of the Bayshore Caltrain Station is thus within a transit priority area.

View types. View types are characterized as foreground, middle-ground, and background views.

- **Foreground** views are those immediately presented to the viewer and include objects at close range that tend to dominate views (generally views within 0.5 mile of the viewer).

- **Middle-ground** views include those in the center of the viewshed and tend to include objects that are the center of attention if they are large or visually different from adjacent visual features (generally 0.5 to 3.0 miles from the viewer).
- **Background** views include distant and other objects that make up the horizon. Smaller objects in the background fade to obscurity with increasing distance, and background views typically include large-scale features 3 miles and farther from the viewer.

Viewshed refers to the geographical areas that are visible from a fixed vantage point and excludes points that are beyond the horizon or obstructed by terrain and other features (e.g., buildings, trees).

Visual unity is the degree to which the visual resources of the landscape join together to form a coherent, harmonious visual pattern. Unity refers to the compositional harmony or inter-compatibility between landscape elements.

4.5.2 PHYSICAL ENVIRONMENTAL SETTING

a. Baseline

The baseline for analysis of aesthetic and visual resources impacts is the physical environmental condition at the time of publication of the recirculated Notice of Preparation (spring 2023).

b. Visual Setting and Context

The City of Brisbane and the Baylands lie within a suburban setting located on the western shore of San Francisco Bay. Brisbane is nestled between the cities of San Francisco (Visitacion Valley and Little Hollywood neighborhoods) to the north, Daly City to the west, and South San Francisco to the south. The Baylands site is located west of US Highway 101, which runs immediately adjacent to the west shore of the San Francisco Bay, separating the Specific Plan area from the Bay.[118] Ground-level views of the Bay from the Baylands are currently blocked by vegetation within the freeway's right-of-way.

As viewed from US Highway 101 and flights leaving the San Francisco International Airport, Brisbane lies within a low-density "cove" formed by the ridges extending from San Bruno Mountain. These ridges, along with the Brisbane Lagoon and the Recology Solid Waste Transfer Facility to the north of the Baylands, physically and visually separate Brisbane and the Baylands from the highly urbanized cities of San Francisco to the north, Daly City to the west, and South San Francisco to the south. Brisbane's hillside geography also means that many residents have

[118] The only portion of Brisbane that directly borders San Francisco Bay is the Sierra Point Subarea, which is on the east side of the US 101 freeway southeast of the Baylands.

unobstructed views of San Francisco Bay and the Oakland Hills beyond, with the Baylands in the foreground of those views.

To the north of the Baylands is the Recology Solid Waste Transfer Facility, consisting primarily of large utilitarian buildings, parking areas, and outdoor storage and work areas. The eastern boundary of the Baylands is formed by the US 101 freeway, which physically separates the site from San Francisco Bay. The Baylands site is partially screened from view along the freeway by vegetative growth within the right-of-way. However, the northern approach to the Baylands along US Highway 101 affords brief but encompassing views of the site, with San Bruno Mountain in the background. Bayshore Boulevard forms the western edge of the Baylands. Icehouse Hill and vegetation along the eastern side of the Bayshore Boulevard right-of-way partially screen the Baylands from views from Bayshore Boulevard.

Central Brisbane is located directly west of the southern portion of the Baylands, across Bayshore Boulevard. Central Brisbane consists of both residential and commercial development. It is developed primarily with 1- to 2-story commercial buildings along Visitacion Avenue and 1- to 2-story single-family houses throughout. Northeast Ridge, which lies northwest of Central Brisbane and west of Guadalupe Canyon, consists of single-family houses and higher-density residential buildings.

A Prologis warehouse complex is located between Bayshore Boulevard and the Caltrain rail lines along the southwestern shore of the Brisbane Lagoon south of the Baylands.

c. Landscape Character Units

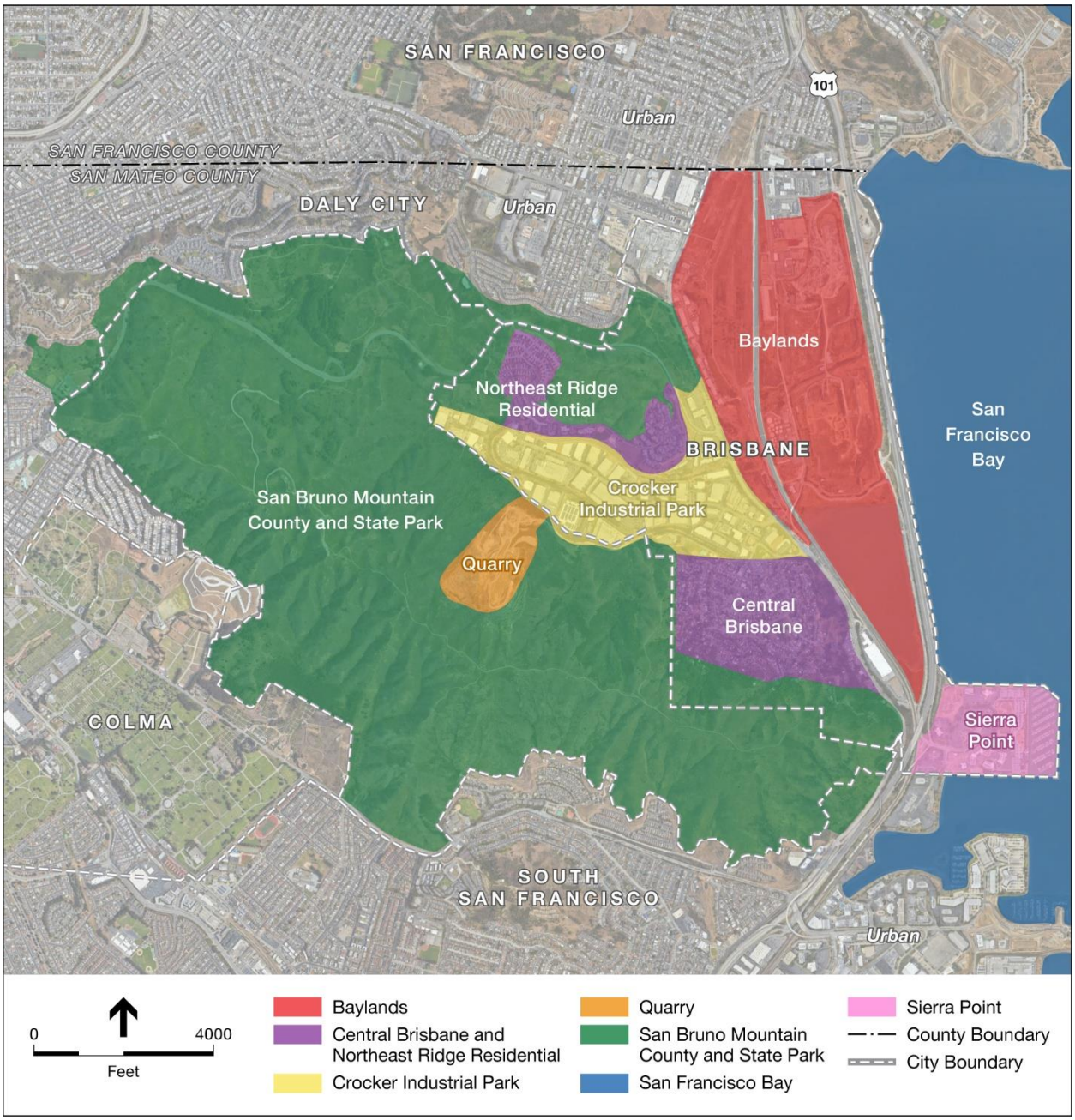
Brisbane and adjacent urban areas encompass distinct natural and constructed landscapes that form eight Landscape Character Units (see **Figure 4.5-1**). Although some Landscape Character Units have common visual features, they vary greatly in overall line, form, color, and texture.

Baylands Landscape Character Unit

The Baylands Landscape Character Unit is characterized by a combination of natural and manufactured features. When viewed from the US 101 freeway, the Baylands' predominant visual character is formed by the open water of the Brisbane Lagoon and the slopes of the former Brisbane landfill, with Icehouse Hill and San Bruno Mountain's ridgeline in the background. When viewed from the middle to upper elevations of Central Brisbane, the predominant visual character is that of a largely open land area with the Brisbane Lagoon and San Francisco Bay in the background.

Within the Baylands, the visual character of the eastern portion of the site is dominated by the slopes and tops of the former Brisbane landfill; Visitacion Creek; the Golden State Lumber yard; vehicle storage uses; small, older industrial buildings; Kinder Morgan Tank Farm; and the large utilitarian buildings of the Recology solid waste transfer facility to the north.

Figure 4.5-1: Landscape Character Units within or Visible to or from the Baylands



SOURCE: Metis Environmental Group, 2025

Separating the eastern portion of the Baylands from the western portion is the Caltrain railroad right-of-way and the Bayshore Caltrain Station. The western portion of the Baylands is visually characterized by a large block of vacant land, remnants of the area's former rail maintenance yard use, and the small industrial uses within the Brisbane Industrial Park.

The patchwork of current uses within the Baylands—older industrial buildings, undeveloped and barren parcels, former landfill, and soil stockpiles from former soils processing uses—and

the abandoned railyard, all contribute to an overall visual character that is in contrast to nearby established urban and suburban communities and the area's scenic resources. Although much of this on-site industrial activity is screened from view from major roadways along the site's periphery, views across and into the Baylands from higher elevations and more distant vantage points capture many of these elements.

Native vegetation types, including coastal scrub and perennial grasslands, are confined to relatively small areas on Icehouse Hill in the western portion of the Baylands, to the tidal and freshwater wetlands along the edges of drainage channels and Brisbane Lagoon, and to seasonal wetlands in the western portion of the site. The Visitacion Creek drainage channel bisects the Baylands along an east-west axis and currently provides a limited amount of riparian vegetation and habitat.

Icehouse Hill

Icehouse Hill is located in the southwestern portion of the site adjacent to Bayshore Boulevard and ranges in elevation from 25 to 200 feet above mean sea level. There are steep cuts adjacent to the Caltrain railroad and more gently sloping cuts along Bayshore Boulevard.

Icehouse Hill, 2024

Brisbane Lagoon

The 121.8-acre Brisbane Lagoon was formed by the construction of the US Highway 101 causeway. The lagoon encompasses open water/estuarine communities and is tidally connected to San Francisco Bay.

View of the Brisbane Lagoon looking southwest

Roundhouse

Constructed circa 1907, the Roundhouse is a classic example of a railroad roundhouse, despite being significantly damaged by fire in recent years. The Roundhouse was listed in the National Register of Historic Places in March 2010 (NR #10000113) and is therefore also listed in the California Register of Historical Resources.

Historic Southern Pacific Roundhouse (See Section 4.7, Cultural Resources and Tribal Cultural Resources, for additional photographs of the Roundhouse)

Constructed of brick and heavy timber, the building's semi-circular plan reflects its function as a railroad roundhouse built to service the steam-powered locomotives of the day. The western half of the building is severely fire-damaged, with portions of its roof missing, charred timbers, and missing or broken window frames. This abandoned building also shows evidence of vandalism and graffiti, despite the chain link fencing that encircles it.

Machinery & Equipment Building (Former SPRR Ice Manufacturing Plant)

Constructed in 1924, this L-shaped brick building consists of three sections: two storage areas in the 2-story square northern portion and the single-story rectangular southern section that was used as the tank and compressor room. This building is included as an "Existing Development Area" within the Specific Plan area.

Former SPRR Ice Manufacturing Plant

Kinder Morgan Brisbane Terminal (Tank Farm)


Kinder Morgan Brisbane Terminal

The Kinder Morgan Energy Partners, L.P. Brisbane Terminal consists of 20 large, light-colored tanks that are visually distinct from the surrounding natural features, such as Icehouse Hill and Brisbane Lagoon. The tank farm is partially screened from Central Brisbane and Northeast Ridge residential development by Icehouse Hill. The Kinder Morgan Tank Farm and the City's corporation yard are located adjacent to Tunnel Avenue and are visible at the southerly entrance to the Baylands from Bayshore Boulevard, as well as from many locations within the Baylands. The tank farm and existing corporation yard site are included in the Specific Plan as an "Existing Use Area." The existing Brisbane Corporation Yard within the Kinder Morgan parcel is proposed to be expanded and relocated to the Specific Plan's Sustainable Infrastructure area.

Brisbane Bayshore Industrial Park

The Brisbane Bayshore Industrial Park consists of 14 industrial buildings, including single- and multi-tenant structures occupied by a variety of warehousing- and supply-related service businesses along Industrial Way in the northwestern portion of the Baylands.


Brisbane Bayshore Industrial Park

San Bruno Mountain Landscape Character Unit

The San Bruno Mountain Landscape Character Unit features a harmonious pattern of steep vegetated mountain slopes and canyons. San Bruno Mountain is generally visually intact and retains its original character, with little encroachment from development. With an elevation over 1,300 feet above mean sea level, San Bruno Mountain is the dominant visual feature of this Landscape Character Unit and the City of Brisbane. Radio Road, leading up from the main entrance to the San Bruno Mountain State and County Park,


Ridges of San Bruno Mountain in the background as viewed from the Bayshore Caltrain Station

affords visitors the opportunity to drive to the summit of the mountain and enjoy views north to Mt. Tamalpais, south to Mt. Diablo, and west to the Farallon Islands. Extending from the mountain is a 4-mile-long ridge west from Bayshore Boulevard and then north, creating Brisbane's unique cove-like setting. San Bruno Mountain and its ridgeline provide a dramatic visual backdrop for the City, while its lower slopes provide residents of Central Brisbane with dramatic views across the Baylands to San Francisco Bay and the hillsides of the East Bay region beyond. The visual quality of the San Bruno Mountain Landscape Character Unit is considered high.

San Francisco Bay Landscape Character Unit

The San Francisco Bay Landscape Character Unit is located across the US 101 freeway to the east of the Baylands. Dramatic blue water views across the Baylands to San Francisco Bay are available throughout large portions of the Brisbane community. The San Francisco Bay Landscape Character Unit's visual quality is considered high.

Central Brisbane and Northeast Ridge Residential Landscape Character Unit

The residential development along the northeast ridge and Central Brisbane forms a single Landscape Character Unit. The northeast ridge residential developments are characterized by clusters of condominiums and townhouses in neutral tones, with rows of single-family residences extending up the hillsides of the western neighborhood. The area surrounding the northeast ridge residential area is clearly distinguished by its natural hillsides that stand out against Crocker Industrial Park and the residential development. Central Brisbane unites with the northeast ridge to form a coherent visual pattern. The residences in Central Brisbane span the lower foothills of San Bruno Mountain, dominating the topography and appearing in similar patterns and of varying colors as northeast ridge residences. The visual quality of Central Brisbane and the Northeast Ridge Residential Landscape Character Unit is considered moderate.

View of the Baylands, San Francisco Bay/ Brisbane Lagoon, and Urban Landscape Character Units

Sierra Point Landscape Character Unit

The Sierra Point Landscape Character Unit is located east of the US 101 freeway and southeast of the Baylands. Visually, Sierra Point consists primarily of the Brisbane marina and mid-rise office buildings and hotels on individual parcels, nearly all of which are provided with surface parking. Newer office development along the edge of San Francisco Bay is more intense than older development and is provided with structured parking. The Brisbane Marina provides a 270-foot guest dock and can house 580 boats ranging in size from 10 to 120 feet. The Marina has a public 300-foot fishing pier, along with panoramic views of San Bruno Mountain and the East Bay. Views between the Baylands and Sierra Point Landscape Character Units are limited by landscaping along the US 101 freeway.

Brisbane Marina

Existing view of Sierra Point from Thomas (Star) Hill in Brisbane looking southeast

Crocker Industrial Park Landscape Character Unit

Crocker Industrial Park's light-colored, square, bulky buildings at the base of Guadalupe Valley are largely intact. Together, the building patterns form unity with similar colors, scale, and repeating styles. The edges of Crocker Industrial Park are well defined and contrast against the natural vegetation and surrounding hillsides by adding a distinct variation in color and form of built structures and ornamental landscaping. Site-specific developments approved through the City's development and design review processes contribute to the overall aesthetic of this industrial and commercially focused area, which has a moderate visual quality.

Quarry Landscape Character Unit

The Quarry Landscape Character Unit is located on the foothill and north face of San Bruno Mountain. Past quarrying operations have resulted in steeply sloped benches with sparse vegetation and a light hue. The clearly defined lines of quarry benches where recontouring has occurred contrast with the natural vegetated slopes of San Bruno Mountain that surrounds the site. The lower portion of the quarry includes a road, equipment, stockpiles, and graded slopes

where soil is loose and little vegetation remains. The Quarry Landscape Character Unit no longer contains its original character and lacks unity. The disturbed nature of the quarry results in low visual quality.

Urban Landscape Character Unit

Densely urbanized areas, including a variety of residential, commercial, and industrial uses are located within the Urban Landscape Character Unit. Along Bayshore Boulevard, uses to the northwest of the Baylands include San Francisco's Visitacion Valley residential neighborhood; to the west, land uses include residential, commercial, and manufacturing uses within Daly City, and the PG&E Martin Substation. Also located within Daly City, approximately five blocks west of the Baylands along Geneva Avenue, is the Cow Palace, an indoor arena used for public events such as concerts, sporting events, and conventions.

To the north within San Francisco are urban residential neighborhoods and the Recology solid waste transfer station (which is also partly within Brisbane). The former Schlage Lock factory, which is currently undergoing site remediation for development of 1,679 dwelling units and up to 46,000 square feet of commercial use as part of a project called "Baylands North," is located immediately north of the Specific Plan area. The Bayview/Hunters Point Redevelopment Project, which has been approved for development of 10,250 dwelling units and 6.4 million square feet of commercial use, is also located within San Francisco, northeast of the Baylands across US Highway 101. Long distance views of downtown San Francisco to the north are also available from many locations.

The Urban Landscape Character Unit is of moderate visual quality due to its distance from the Baylands. However, nighttime views of city lights to the north in San Francisco are of high quality, although limited in extent.

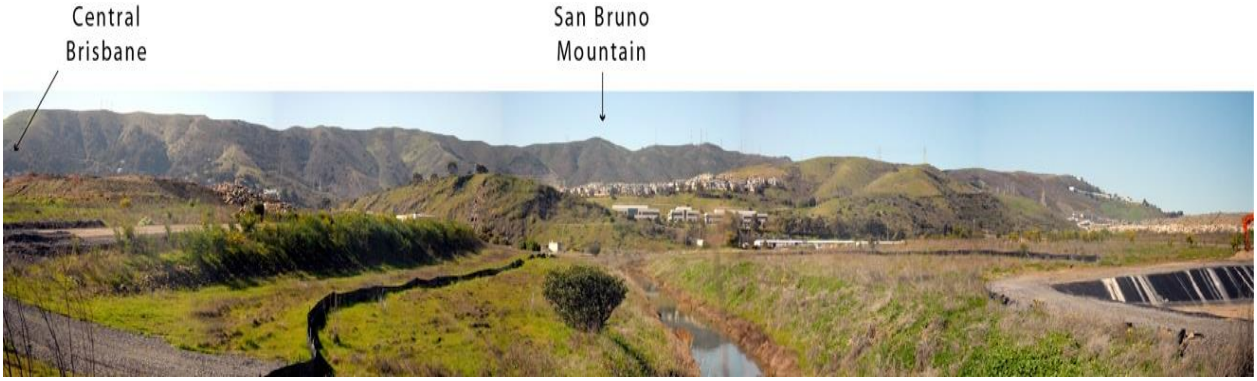
d. Views within and from the Baylands

At some higher locations within the Baylands, important visual features can be seen in every direction, including San Francisco Bay and the East Bay hills to the east; John McLaren Park, the San Francisco financial district, and Candlestick Point State Recreation Area to the north; and San Bruno Mountain and Central Brisbane to the southwest. Views southward across the lagoon from Lagoon Road provide visual access to Sierra Point, Oyster Point, and San Bruno Mountain. Visibility of US Highway 101 is limited due to the Baylands' topography and landscaping along the freeway edge. Views from Icehouse Hill[119] and from Lagoon Road also depict publicly accessible locations, which are therefore defined as scenic vistas.

[119] While Icehouse Hill is not currently accessible to the general public, the proposed development of trails on the hill would provide for public access and views.

View from Visitacion Creek, Looking East

View from Icehouse Hill, Looking North toward John McLaren Park, San Francisco, and Candlestick Point



View from Visitacion Creek, Looking Southwest toward San Bruno Mountain

View from Lagoon Road, Looking South toward Oyster Point

Important visual features that can be seen across the Baylands from these surrounding areas include San Francisco Bay, Bayview Park, Candlestick Point, John McLaren Park, San Bruno Mountain, the East Bay hills, and high-rise buildings of the San Francisco financial district. While the visual simulations provided below in **Tables 4.5-2a through Table 4.5-2r** shows numerous viewpoints from publicly accessible locations, not all viewpoints provide significant visual access to important visual features. As such, Viewpoints 4 and 9 are not considered scenic vistas, but are included for informational purposes and to support the analysis of Specific Plan visual character changes.

e. Scenic Vistas

Scenic vistas represent public viewing opportunities that provide visual access to scenic resources, including views of the Bay, striking or unusual natural terrain, or unique urban or historic features. For the purposes of this analysis, a scenic vista includes two components. The first relates to defining what constitutes the "scenic resource" being viewed. On-site scenic resources were described in the previous subsection. However, there are also a number of "scenic resources" that are off-site but can be viewed either from across the Baylands or from off-site locations. These off-site scenic resources include San Francisco Bay, Bayview Park, Candlestick Point, John McLaren Park, San Bruno Mountain, the East Bay hills, and high-rise buildings of the San Francisco financial district. The second component of a scenic vista is the public viewing opportunity, whether on-site or off-site. If a site from which a scenic resource is viewed does not provide a public viewing opportunity (i.e., private view), it is not considered a scenic vista in this analysis.

f. Light and Glare

Because the Baylands lacks substantial existing development, only minimal nighttime lighting is generated, which is limited to the areas around the existing industrial uses in the northern and southwestern portions of the site. This allows for substantial nighttime visibility across the Baylands, including views of the city lights of the East Bay, as seen from residences in the higher elevations of Brisbane. The existing lack of substantial nighttime lighting within the Baylands also allows views of the lights of San Francisco in the distance from vantage points to the south. Nighttime views of the Bay are available from higher-elevation neighborhoods in Central Brisbane and the southern portion of San Francisco due, in part, to the darkness at the Baylands. However, nighttime views from these neighborhoods are affected by existing residential and street lighting and existing reflected light emanating from Daly City, San Francisco, and US Highway 101.

The Baylands site currently contains mainly soil cover and vegetation. Existing buildings and structures within the Baylands are largely devoid of reflective surfaces. As a result, little daytime glare is generated within the Baylands.

4.5.3 REGULATORY CONTEXT FOR BAYLANDS DEVELOPMENT

a. Federal Laws, Plans, Programs, and Regulations

There are no federal laws, plans, programs, or regulations addressing aesthetic and visual resources issues that would affect Baylands development

b. State Laws, Plans, Programs, and Regulations

California Scenic Highway Program

In 1963, the California legislature established the state's Scenic Highway Program (Streets and Highways Code Sections 260–263) to preserve and protect scenic highway corridors from changes that would diminish the aesthetic value of lands adjacent to highways and "establish the State's responsibility for the protection and enhancement of California's natural scenic beauty by identifying those portions of the state highway system which, together with the adjacent scenic corridors, require special scenic conservation treatment." The program includes both "eligible" and "official" scenic highways.

State standards for official scenic highways require that prior to official designation, local governmental agencies have already taken necessary actions to protect the scenic appearance of the scenic corridor, which encompasses the land generally adjacent to the highway right-of-way. Such actions include but are not limited to (1) regulation of land use and intensity of development; (2) detailed land and site planning; (3) control of outdoor advertising; (4) careful attention to and control of earthmoving and landscaping; and (5) review of the design and appearance of structures and equipment.

The Baylands site is not within or visible from any existing eligible or official scenic highway. The nearest Scenic Highway is the Interstate 280 freeway (I-280), approximately four miles to the west. San Bruno Mountain and the adjacent ridgeline block views between the Baylands and the I-280 scenic corridor.

Open Space Easement Act of 1974

Cities and counties are permitted to use open space easements as a mechanism to preserve scenic resources if they have adopted open space plans, as provided by the Open Space Easement Act of 1974 (Government Code Sections 51070, 51097). The Act permits cities and counties to acquire or approve an open space easement through a variety of means, including use of public funds.

c. City of Brisbane Plans, Ordinances, and Regulations

General Plan

General Plan policies and programs that pertain to aesthetic and visual resources are identified below.

Chapter V: Land Use

Policy LU.2: Development south of the Bayshore Basin drainage channel shall maintain a low profile, permitting low- or mid-rise buildings, not to exceed 6 stories in height, in order to preserve the existing views of San Francisco and San Francisco Bay as seen from Central Brisbane, and to maximize the amount of landscape and open space or open area in this portion of the subarea.

Program LU.6a: When drafting development standards, consider preserving a sense of openness in the design of structures and sites and the access to sky and sunlight for both new construction and renovation projects.

Policy LU.8: Acknowledge the mountain setting and the proximity to the Bay as central factors in forming the physical character of the City.

Program LU.8.a: In making land use decisions, consider the proximity of open space on San Bruno Mountain and public views of and access to the Bay as issues to be addressed.

Policy LU.9: Preserve the ridgelines and hilltops in their open state.

Program LU.9.a: Prohibit land use changes that would result in development that would break the natural ridgeline.

Policy LU.11: In the context of respecting private property rights, make every effort to preserve and enhance public views of the Mountain and the Bay.

Program LU.11.a: Identify and map vistas and view corridors of community-wide value to be preserved and enhanced.

Policy LU.18: Locate and design commercial recreational facilities and services so as to encourage use by a broad spectrum of Brisbane residents and businesses.

Policy LU.20: The establishment of open areas within private developments shall be utilized as a means of preserving unique environmental features on the site or avoiding the appearance of excessive bulk or concentration of structures.

Policy LU.22: Retain sufficient open areas between structures to meet safety requirements, protect privacy and provide opportunities for landscaping.

Policy LU.28: Design new streets to be attractive and comfortable for pedestrians and bicyclists, and to safely accommodate vehicular traffic. Street configuration, landscape and signage should all be considered as they contribute to community character.

Program LU.28.a: Require landscaping along all major arterial streets.

Program LU.28.b: Construct landscaped medians where appropriate in arterial streets.

Program LU.28.c: Use drought resistant, water-conserving non-invasive plant materials that reflect local character.

Program LU.28.f: Prohibit new commercial billboard sites and seek to remove those currently in place.

Chapter XII: Policies and Programs by Subarea

Policy BL.3: Address visual impacts of any future development in the following manner:

Program BL.3.a: Environmental review for the required Specific Plan shall include a visual impact analysis which shall include an evaluation of the impacts of building heights, including the impact of the proposal on view corridors.

Program BL.3.b: The required Specific Plan shall address the heights of buildings and building groups to achieve the following:

i. diversity of height within the subarea;

ii. creative excellence in architectural and site design;

iii. visual acceptability when seen from above;

iv. a complementary relationship to the overall topography, especially the Lagoon, San Bruno Mountain and the Bay, and the entrance to Central Brisbane; and

v. open space and open areas.

Development south of the Bayshore Basin drainage channel shall maintain a low profile permitting low- or mid-rise buildings, not to exceed 6 stories in height, in order to preserve the existing views of San Francisco and San Francisco Bay as seen from Central Brisbane, and to maximize the amount of landscape and open space or open area in this portion of the subarea.

The following design approaches shall not be included in the required specific plan or any development proposal:

i. Buildings or building groups that block view corridors to the Bay or appear as "fortresses" or "walls" lining the Bayfront, the Lagoon, or any arterial street.

Policy BL.6: Establish a safety buffer around and provide for visual screening of the Tank Farm.

Policy BL.7: Give aesthetic consideration to views of San Bruno Mountain, the Bay and the Baylands development itself from Central Brisbane as well as views from the Baylands in the design of any development.

Policy BL.10: Develop design guidelines as a part of the Specific Plan for the Baylands. In the design guidelines, incorporate standards for roofs, emphasizing color, materials and screening, so as to consider views from above.

Policy BL.11: Retain and enhance landscaping along Bayshore Boulevard to buffer traffic noise and enhance the visual appearance of land uses fronting of the roadway.

Policy BL.16: Enhance the natural landform and biotic values of Icehouse Hill and preserve its ability to visually screen the Tank Farm.

Municipal Code

Chapter 17.42 Design Permit – Required Findings

Chapter 17.42 of the Brisbane Municipal Code requires a design permit to be obtained "for the construction of any new principal structure" that is not subject to requirements for objective development standards pursuant to the Housing Accountability Act (i.e., non-residential development). Prior to the issuance of a design permit, the Planning Commission must make the following findings enumerated in Municipal Code Section 17.42.040:

A. The proposed development is consistent with the general plan and any applicable specific plan.

B. The proposal's scale, form, and proportion are harmonious, and the materials and colors used complement the project.

C. The orientation and location of buildings, structures, open spaces and other features integrate well with each other and maintain a compatible relationship to adjacent development.

D. Proposed buildings and structures are designed and located to mitigate potential impacts to adjacent land uses.

E. The project design takes advantage of natural heating and cooling opportunities through building placement, landscaping and building design to the extent practicable, given site constraints, to promote sustainable development and to address long term affordability.

F. For hillside development, the proposal respects the topography of the site and is designed to minimize its visual impact. Significant public views of San Francisco Bay, the Brisbane Lagoon and San Bruno Mountain State and County Park are preserved.

G. The site plan minimizes the effects of traffic on abutting streets through careful layout of the site with respect to location, dimensions of vehicular and pedestrian entrances and exit drives, and through the provision of adequate off-street parking. There is an adequate circulation pattern within the boundaries of the development. Parking facilities are adequately surfaced, landscaped and lit.

H. The proposal encourages alternatives to travel by automobile where appropriate, through the provision of facilities for pedestrians and bicycles, public transit stops and access to other means of transportation.

I. The site provides open areas and landscaping to complement the buildings and structures. Landscaping is also used to separate and screen service and storage areas, break up expanses of paved area and define areas for usability and privacy. Landscaping is generally water conserving and is appropriate to the location. Attention is given to habitat protection and wildland fire hazard as appropriate.

J. The proposal takes reasonable measures to protect against external and internal noise.

K. Consideration has been given to avoiding off-site glare from lighting and reflective building materials.

L. Attention is given to the screening of utility structures, mechanical equipment, trash containers and rooftop equipment.

M. Signage is appropriate in location, scale, type and color, and is effective in enhancing the design concept of the site.

N. Provisions have been made to meet the needs of employees for outdoor space.

Chapter 17.45, Housing Development Permits

Municipal Code Chapter 17.45 requires issuance of a housing development permit "for the construction of any new principal structure that meets the definition of a housing development or a streamlined housing development project …" Section 17.45.030 provide objective development standards for:

- Site design
- Roof design
- Materials
- Window Design
- Stepbacks

- Massing and articulation
- Parking Design and Location
- Accessory Elements
- Additional objective standards, including but not limited to development regulation, parking standards in Chapter 17.34, and signage standards in Chapter 17.36.

Chapter 15.70, Water Conservation in Landscaping

Chapter 15.70 of the Brisbane Municipal Code requires Baylands landscaping to be designed for water efficiency. Two options are provided for site-specific developments to demonstrate that the landscape meets the City's water efficiency goals, consistent with the State's Model Water Conservation in Landscaping Ordinance, including:

1. **Prescriptive Compliance Option.** The prescriptive compliance option includes specific landscape area limitations for moderate to high water use plants along with other site preparation compliance measures.
2. **Water Budget Calculation Option.** Chapter 15.70 provides for preparation of a water budget calculation for proposed landscaping using the City's water efficient landscape worksheet. Water budget calculations, if prepared, are required to adhere to water budget parameters that are consistent with the State's Model Water Conservation in Landscaping Ordinance.

Chapter 15.88, Brisbane Dark Sky Ordinance

In November 2023, the Brisbane City Council adopted Municipal Code Chapter 15.88 to establish quantitative standards to reduce nighttime lighting impacts while providing the lighting necessary to ensure community safety and security. The requirements of Chapter 15.88 focus on the following key strategies:

- **Sitewide illumination limits that vary by zoning district:** Chapter 15.88 sets standards to limit the total illumination generated by all exterior lighting on a given property.

  Because Chapter 15.88 does not establish specific property illumination standards for development within the Baylands,[120] this EIR establishes specific standards in Threshold AES-4 to analyze impacts to the community's dark night sky that have been derived from the illumination limits set forth in Chapter 15.88.

  - Maximum permitted illumination for residential zones and uses are based on lumens per square foot of developed lot area (roughly equivalent to lot coverage).

[120] All other provisions of Municipal Code Chapter 15.88 apply to Baylands development.

  - Maximum permitted illumination within commercial and open space uses is based on lumens per square foot of hardscape (i.e., driveways, parking lots, patios). The maximum permitted illumination of open space areas per square foot of hardscape area is ten percent of that allowed within commercial zones.

- **Shielding:** All outdoor light fixtures are required to be fully shielded, that is, physically covering the light source so that light is only emitted downward, except low-intensity string lights, seasonal lighting, and lighting of a US or state flag.
- **Light trespass:** The light source (i.e., bulb) cannot be visible off-site of the property. Low-intensity string lights, seasonal lighting, and lighting of a US or state flag are exempt from light trespass standards.
- **Color temperature:** The "correlated color temperature" of outdoor lighting, except seasonal or other exempted lighting, shall be 3000 Kelvin or less, which is a "warmer" yellow light as opposed to "cooler" blue light hues that mimic daylight.
- **Curfews and other lighting controls:** Most outdoor lighting is required to go off after 10:00 p.m. or close of business, whichever is later. Lighting that is activated by motion sensor which extinguishes ten minutes after activation and lighting at building entrances, parking areas and driveways (residential), or driveway egress points (commercial) is not subject to curfew requirements. Commercial uses are required to utilize automated control systems such as motion sensors, timers and/or photocells that are programmable and have battery backup.

  Chapter 15.88 also exempts or establishes limited requirements over certain lighting types:

  - Low-intensity landscape lighting, indoor lighting, combustible fuel lighting when used temporarily in occupied areas, fire alarm notification devices, and any form of lighting regulated by authorities other than the City (e.g., school districts, federal agencies such as the Coast Guard).
  - Lighting of addresses, temporary emergency or construction lighting, and temporary lighting not subject to city permitting are exempt from specific standards but are required to be deployed to comply with Chapter 15.88 standards to the greatest practical extent.
  - Seasonal/holiday lighting is exempt from shielding requirements between September 15 and January 31 but still subject to curfew requirements. Brisbane Stars are not considered as seasonal/holiday lighting and are exempt from most regulations but are subject to curfew requirements.
  - Streetlights are not subject to curfew requirements. The lumen output of each streetlight shall be the lowest reasonable to meet safety standards but in no case exceed 10,000 lumens.

- Lighting for recreational and athletic fields is required to meet appropriate Illuminating Engineering Society standards, must extinguish by 8:00 p.m. except when being used for active play, and include timers to prevent lights being left on accidentally.

The provisions of Chapter 15.88 do not apply to construction activities.

4.5.4 RELEVANT SPECIFIC PLAN PROVISIONS

The Baylands Specific Plan includes the following provisions that address measures to avoid or minimize aesthetic and visual resource impacts.

a. Architectural Design Guidelines

Baylands Specific Chapter 3 provides design guidelines for each building type, including guidelines for:

- Building modulation and articulation
- Roof design
  - Roofline modulation and variety
  - Rooftop terraces and shade structures
- Façade design
  - Fenestration
  - Building entries
  - Materials
- Parking and access
- Signage design
  - Tenant signs
  - Commercial building identification signs
- Sustainability strategies supporting zero carbon buildings

In addition to design guidelines, the Specific Plan also contains the following provisions:

- "To avoid a continuous massing wall and blockage of views to the Bay, a minimum (70-foot) building separation[121] is required for the Multi-Family High building type. Height flexibility and massing also prevent blockage of views." (Applies to the Roundhouse District.)
- "These buildings also vary in height, massing and separation, ensuring there is no continuous wall along the tracks that may potentially obstruct views of the Bay from neighborhoods to the west." (Applies to the Bayshore District.)
- "To preserve views to the San Francisco Bay, any development within 350 feet west of US Highway 101 shall be limited to a height of 80 feet based on the grading plan included in the proposed Brisbane Baylands Infrastructure Plan." (Applies to the Campus East District.)

b. Nighttime Lighting

Baylands Specific Plan Section 3.8 requires Baylands development to comply with the following lighting design standards.

- Limit light spill across the property lines, such that illumination at the property line of any use within the Specific Plan area that is attributable to the subject property does not exceed 0.1 foot-candles on business properties and 0.05 foot-candles on residential properties and open space areas. On-site lighting of site-specific development within the Specific Plan area is required to prevent direct-beam illumination from leaving the site.
- Street lighting shall be comprised of shorter, LED, pedestrian-scaled fixtures, rather than tall cobra head fixtures, and focus the light downward onto the pedestrian through zone.
- Off-street pedestrian walkways and trails shall have bollard-type lighting to ensure visibility and safety for pedestrians, cyclists, and others.
- Laser source lights and searchlights, and any other high-intensity light for outdoor advertising or entertainment used to attract attention to commercial activities or community events, shall be prohibited.
- Light fixtures that produce a warm light and focus the light downward onto the pedestrian zone shall be selected.
- Landscape lighting shall be unobtrusive and shielded to prevent glare such as bollard-type fixture or ground-mounted up-lights for trees.

[121] In addition to the required 70-foot "building to building separation between towers" required for Multi-Family High buildings, the Specific Plan requires a 40-foot building-to-building separation for Multi-Family Mid buildings and 30 feet for Multi-Family Low, Townhome, and Duplex/Single Family buildings. Required building-to-building separation requirements for commercial buildings include 70 feet for TOD Commercial, with no requirements for separating other commercial building types.

- Entry monuments shall be lighted with low-level lights with fixtures concealed to highlight the names, maps, etc.
- All parking lots, recreational areas, walkways, and trail lighting shall have no light emitted above 90 degrees.
- Specific Plan lighting shall be designed to control light energy and ensure that exterior lighting is directed downward and away from adjacent streets and buildings in a manner designed to minimize off-site light spillage.
- Preserve Brisbane's existing dark sky views through light pollution reduction measures, including compliance with CALGreen light reduction standards, and compliance with one or more of the following measures:
    (i) Use of exterior light fixtures that prevent light trespass, and direct light downwards instead of up to the sky and avoid use of blue light.
    (ii) When interior or exterior lights must be left on at night, the operator of the buildings shall examine and adopt alternatives to bright, all-night, floor-wide lighting, which may include:
    (iii) Installing motion-sensitive lighting.
    (iv) Using desk lamps and task lighting.
    (v) Reprogramming timers.
    (vi) Use of lower-intensity lighting

The Specific Plan also provides the following standards for lighting within habitat areas:

- Site lighting within habitat areas shall be used minimally and appropriately to reduce the impact on the ecological environment, and deployed as needed for accessibility, safety, and security.
- Near wetland habitat areas, street lighting shall be provided only at intersections.
- Low intensity streetlamps and low elevation lighting poles shall be used.
- Internal silvering of the globe or external opaque reflectors shall be provided to direct light away from preserved wetland or open water habitats.
- Private sources of illumination around homes shall also be directed and/or shaded to minimize glare into these habitats.

The following examples of treatments to address the potential of bird strikes within the Baylands are provided in the Specific Plan:

- Use of low profile, low intensity lighting directed downward.
- Use of shielded fixtures for outdoor lighting.

c. Glare

Specific Plan provision addressing glare are described below.

- Section 3.8.1 includes the following requirements:
    - Landscape lighting shall be unobtrusive and shielded to prevent glare such as bollard-type fixture or ground-mounted up-lights for trees.
    - Private sources of illumination around homes shall also be directed and/or shaded to minimize glare into these habitats.
- Multi-family High and Multi-family Mid building façades are not permitted to exceed a 60/40 window to wall ratio.

4.5.5 SIGNIFICANCE CRITERIA

The following criteria were used to determine the significance of aesthetic resources impacts.

Threshold AES-1 **The Baylands Specific Plan would cause a significant impact if public views of identified scenic resources (San Bruno Mountain and adjacent ridgelines, San Francisco Bay, and the Brisbane Lagoon), including those within a state scenic highway, would be substantially or completely blocked.**

Threshold AES-2 **The Baylands Specific Plan would cause a significant impact if scenic resources, including those within a state scenic highway, were to be substantially removed or altered.**

Threshold AES-3 **The Baylands Specific Plan would cause a significant impact if it would not be consistent with the visual quality related policies and programs set forth in the Brisbane General Plan and Municipal Code, thereby impeding attainment of a complementary visual relationship between Baylands development and:**

- **Existing and planned development surrounding the Baylands,**
- **The area's overall topography;**
- **Brisbane Lagoon;**
- **San Bruno Mountain;**
- **San Francisco Bay; or**
- **Entrances to Central Brisbane.**

Threshold AES-4 **The Baylands Specific Plan would cause a significant impact if new sources of light created by Baylands development would adversely affect light-sensitive land uses or nighttime views by:**

- **Permitting light sources to direct night lighting beyond the ground surface onto windows of residential or hotel buildings within or outside of the Baylands;**
- **Causing light trespass from a site-specific development project onto residential, commercial, hotel, or open space areas exceeding either:**
  - **0.1 foot-candles on business properties or 0.05 foot-candles on residential properties and open space areas outside of the site-specific development area; or**
  - **0.01 foot-candles as measured 10 feet beyond the boundaries of the site-specific development project;**
- **Causing a safety hazard by directing light into the view of motorists; or**
- **Reducing nighttime views of either distant lights (e.g., across the Bay or in San Francisco) or of stars in a dark night sky by permitting:**
  - **Any exterior lighting emitted either directly or indirectly from a fixture above a horizontal plane from the bottom of the lamp;**
  - **Any unshielded or partially shielded fixture;**
  - **Any exterior lighting with a correlated color temperature greater than 3,000 Kelvin that is not otherwise exempted by the provisions of Municipal Code Chapter 15.88;**
  - **More than 1.75 lumens per square foot of developed lot area within a residential parcel;**
  - **More than 3.5 lumens per square foot within commercial, amenities, public facilities, and sustainable infrastructure areas; or**
  - **More than 0.35 lumens per square foot of trail or hardscape area within a park or open space area.**

Threshold AES-5 **The Baylands Specific Plan would cause a significant impact if new sources of glare created by Baylands development would adversely affect views in the area by placing reflective building materials on buildings, signage, or thematic elements so as to produce glare that would create a visual hazard or annoyance for a prolonged period of time.**

4.5.6 PROJECT IMPACTS AND MITIGATION MEASURES

a. Impact AES-1: Public Views of Identified Scenic Resources

Methodology for Determining Significance

Visual simulations were undertaken to illustrate changes to public views of scenic vistas that would result from the Baylands Specific Plan.[122] These visual simulations encompass the maximum amount of development permitted by the Specific Plan and its development regulations. These visual simulations were used to assess the potential for proposed Baylands development to block public views of identified scenic resources (San Bruno Mountain and the adjacent ridgeline, San Francisco Bay, and the Brisbane Lagoon), or result in visual degradation of a scenic vista as viewed from public locations that would be discernible across the Baylands from the representative public viewpoints in Brisbane and San Francisco. Should the Specific Plan substantially or completely block views of San Bruno Mountain and its adjacent ridgelines, or views of San Francisco Bay and the Brisbane Lagoon from public vantage points, a substantial adverse effect on a scenic vista (i.e., significant impact) would result.

Establishing the Viewpoints

The analysis of changes to public views of scenic resources is accompanied by a series of photographs and visual simulations for representative public viewpoints from, within, and surrounding the Baylands (see **Figure 4.5-2**). The selected representative viewpoints include those that were previously analyzed in the Program EIR leading to the adoption of GP-1-18. A total of eighteen (18) viewpoints are analyzed, including viewpoints from:

- Brisbane outside the Baylands;
- San Francisco;
- Daly City; and
- Within the Baylands.

Overall, the viewpoints identified in **Figure 4.5-2** represent a reasonable range of public viewpoints and provide for comparison of the visual effects of the proposed Specific Plan with existing conditions. As such, the photographs and visual simulations for these viewpoints

[122] As noted in Section 4.5.2b, above, neither the Specific Plan area nor off-site infrastructure are within or visible from any existing eligible or official scenic highway. The nearest Scenic Highway is the Interstate 280 freeway (I-280), approximately 4 miles to the west. San Bruno Mountain and the adjacent ridgeline block views between the Baylands and the I-280 scenic corridor. Therefore, the analysis of Threshold AES-1 addresses only scenic vistas outside of an eligible or official scenic highway.

provide a reasonable basis for evaluating the effects of proposed Baylands Specific Plan development on scenic vistas.

Building the 3-D Conceptual Models

To evaluate the impacts of the Baylands development on existing scenic vistas, geo-referenced site photographs from the viewpoints described above were taken with a 35-millimeter (mm) lens at 50-mm focal length. A digital three-dimensional model of the Baylands and surrounding area was constructed, incorporating the proposed grading plan provided in the draft Infrastructure Plan (Draft EIR Appendix A.3), using SketchUp™, a three-dimensional modeling program. The model of the Baylands and the surrounding area was used as a base for the conceptual model of proposed Baylands development, which were placed in the Baylands and surroundings model using geo-referenced locations per Google Earth™.

As permitted by state law, the Baylands Specific Plan does not identify the precise location, height, setbacks, and massing and shape of each on-site building. Instead, the Specific Plan sets forth the land use, zoning, development regulations, and design guidelines to which future site-specific development projects must adhere. These regulations provide for numerous possible variations of specific building massing throughout the Baylands. As a result, the three-dimensional model was constructed to represent a reasonable demonstration of worst-case potential for view obstruction of scenic vistas given applicable development requirements, such as total amount of allowable building area, allowable building heights, setbacks, and floor area ratios (FARs).

The model presents the result of applying assumptions for typical building widths, FARs, and floor level heights, combined with the maximum heights for buildings in any given land use district given the total number of dwelling units and amount of non-residential building square footage permitted within the Baylands.

The tallest proposed buildings with the greatest potential to intrude into scenic vistas from public viewpoints were modeled at their maximum permitted height. Other buildings were modeled with minimum permitted setbacks and building separations to maximize bulk and the potential to block views through the Baylands. The resulting model thus reflects the maximum number of dwelling units and commercial square footage permitted for the Baylands Specific Plan area arranged so as to provide a conservative analysis illustrating maximum impacts. Because Impact AES-1 analyzes effects on scenic vistas, the Baylands development model illustrates the maximum extent to which views of scenic vistas would be blocked rather than individual building shapes, architectural styles, articulation, setbacks, fenestration (windows), or cladding materials. Similarly, while development of open space areas and parks as proposed in the Specific Plan would change the appearance and character of the site, the models do not reflect those visual changes as they would not affect scenic vistas.

Building the Visual Simulations

The three-dimensional model was used in conjunction with Google Earth™ and site photos to create visual simulations of proposed Specific Plan development from the selected viewpoints used to analyze visual impacts in the Program EIR previously prepared for the Baylands along with additional new viewpoints. The visual simulations illustrate changes to the existing setting that would occur as a result of Specific Plan development. Simulations were not created to show interim changes in visual character, such as site preparation and grading activities during construction and phased development over time, because such changes would not impair the visibility of existing scenic vistas.

Impacts Associated with Off-Site Project Components

Lands associated with the Bayshore Mobility Plan, relocated Fire Station No. 81, conversion of the existing Bayshore School to an elementary school, and off-site infrastructure improvements would not involve construction of facilities that could adversely affect public views of San Bruno Mountain and its adjacent ridgelines, San Francisco Bay, or the Brisbane Lagoon. The relocated fire station would be no taller than the existing two-story building at the relocation site and no new structures are planned at the existing fire station site. No new structures are proposed at the existing Bayshore School, nor would the height of any existing structure be increased. Improvements at the Martin Substation would be no taller than existing facilities. Off-site improvements would involve utility line trenching that would not affect scenic vistas.

Determination of Significance

Scenic vistas that could be adversely affected by Baylands development include public views of San Bruno Mountain and its adjacent ridgelines, as well as public views of San Francisco Bay and the Brisbane Lagoon. Thus, should the Specific Plan substantially or completely block views of San Bruno Mountain and its adjacent ridgelines or views of San Francisco Bay or Brisbane Lagoon from public vantage points, significant impact would result.

Impact Assessment

Construction Impacts

Construction activities would involve grading and landform alteration, including removal of vegetation in areas to be graded, extraction and temporary stockpiling of soils, demolition of existing structures, storage of construction equipment and building materials, and construction of buildings and infrastructure. Construction activities, including staging of construction equipment and storage of construction materials, would be visible from much of the upper elevations of Central Brisbane, as well as to travelers along the US 101 freeway and Bayshore Boulevard. While these activities would be visible from several public viewing locations, they would be short term and except for building construction,[123] would not be of a sufficient height or scale as to block or otherwise damage scenic vistas.

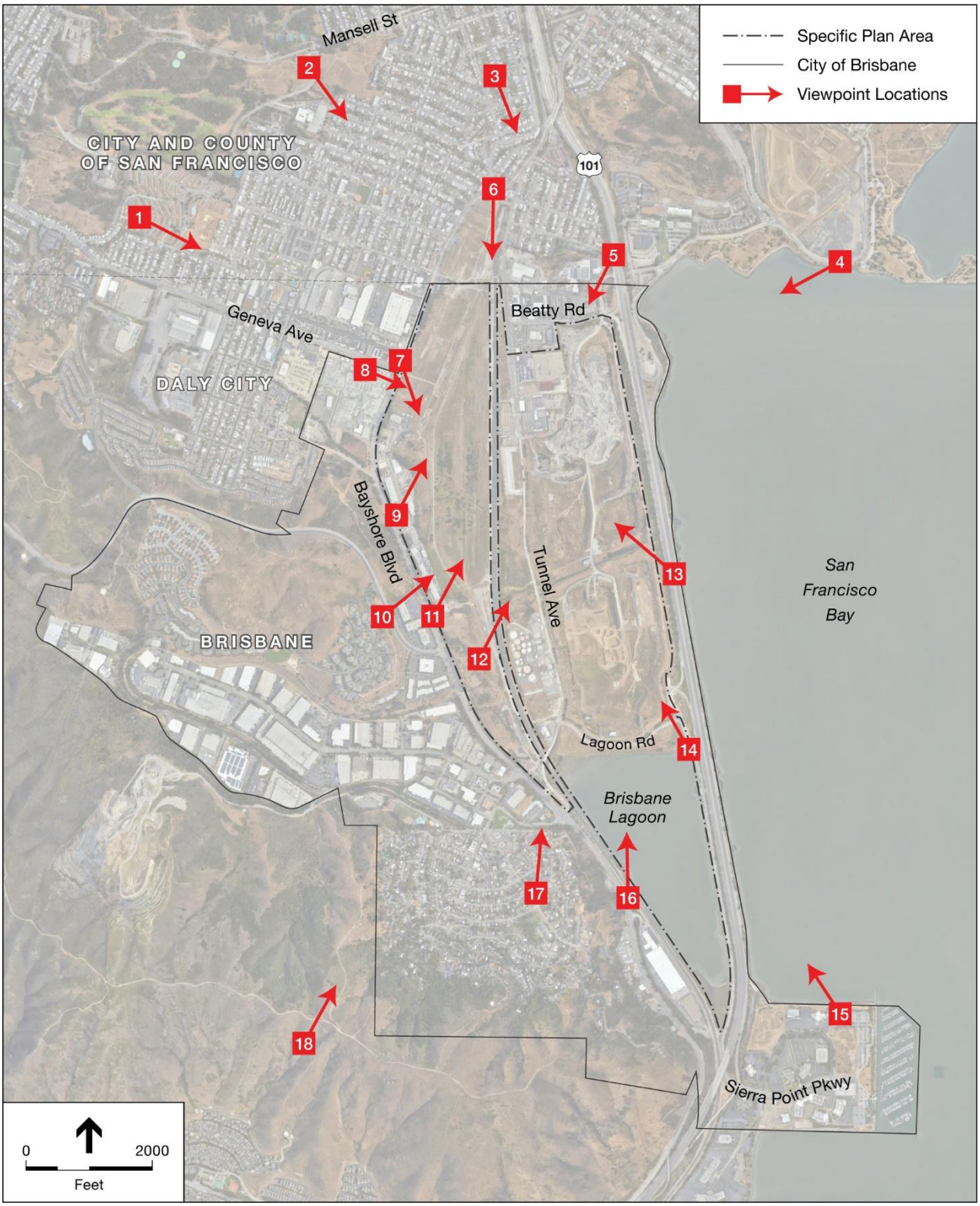
Long-Term Post-Construction Impacts

Table 4.5-2 compares existing views from 18 vista points with visual simulation of 2025 Specific Plan project development. As demonstrated in these visual simulations, Baylands development would obstruct some views of San Francisco Bay and San Bruno Mountain when viewed from lower elevations. In addition, from ground level and lower elevations, buildings within the Baylands would appear as a solid mass. Note, however, that the actual architectural design of Baylands development would provide for substantially greater variation in building shapes, façade colors and textures, and roof lines than what is possible to show with visual simulations.

As illustrated in Viewpoint 1, the proposed towers that would be 20+ stories in height along the west side of the Caltrain right-of-way partially block views of the Bay, even though the Specific Plan adheres to Program EIR Mitigation Measure 4.A-1a. This measure requires development within 350 feet of the eastern boundary of the Baylands (US Highway 101) be designed to avoid blockage of views of the Bay shoreline by limiting the height of buildings within 350 feet of the freeway to 80 feet in height.

[123] The potential for building construction to obstruct views of identified scenic features is addressed as a long-term post-construction impact since its impact would not cease with completion of construction activities.

Figure 4.5-2: Location of Viewpoints for Visual Simulations



SOURCE: Metis Environmental Group, 2022

Table 4.5-2a: Visual Simulations of Specific Plan Development: Viewpoint 1

Viewpoint 1: Blythedale Avenue at Brookdale Avenue in San Francisco's Sunnydale neighborhood, facing east

Existing View

Higher elevations in San Francisco's Sunnydale neighborhood have partial views of the Bay from public locations.

Visual Simulation of Specific Plan Development

Buildings that are 20+ stories in height along the west side of the Caltrain right-of-way and a mid-rise building in the northwestern portion of the Baylands would partially obscure the view of San Francisco Bay and the East Bay hills, although portions of the Bay and most of the hills beyond the Bay would remain visible from this location.

Table 4.5-2b: Visual Simulations of Specific Plan Development: Viewpoint 2

Viewpoint 2: Overlook Point at John McLaren Park, facing southeast

Existing View

The overlook point at John McLaren Park provides an uninterrupted view of the Bay, Brisbane Lagoon, and San Bruno Mountain (right).

Visual Simulation of Specific Plan Development

Views would be altered by buildings 20+ stories in height along the west side of the Caltrain right-of-way in the foreground of views of the Bay. Views of the Bay, Brisbane Lagoon, and San Bruno Mountain would largely be preserved.

Table 4.5-2c: Visual Simulations of Specific Plan Development: Viewpoint 3

Viewpoint 3: Goettingen Street at Wilde Avenue in Visitacion Valley, facing south

Existing View

This higher elevation in Visitacion Valley allows views of the Bay (left) and the San Bruno Mountain ridge (right).

Visual Simulation of Specific Plan Development

Baylands development would not impede views of the Bay or San Bruno Mountain from this viewpoint, but would be seen as a solid mass of moderate-height buildings. Taller Baylands buildings west of the Caltrain tracks would be visible at the far right, where they would partially obscure views of the lower portion of San Bruno Mountain.

Table 4.5-2d: Visual Simulations of Specific Plan Development: Viewpoint 4

Viewpoint 4: Candlestick Point State Recreation Area, facing southwest

Existing View

Scenic vista from the Candlestick Point State Recreation Area toward the Baylands north of Visitacion Creek (left) include the Bay (foreground) and San Bruno Mountain (background).

Visual Simulation of Specific Plan Development

Baylands buildings that would be 20+ stories in height along the Caltrain right-of-way would partially block views of San Bruno Mountain, while views of the main ridgeline would remain.

Table 4.5-2e: Visual Simulations of Specific Plan Development: Viewpoint 5

Viewpoint 5: US 101 freeway southbound view entering San Mateo County and the City of Brisbane

Existing View

Tall trees along the edge of southbound lanes block views to the east; however, a break in the existing windrow near the county line allows partial views of San Bruno Mountain.

Visual Simulation of Specific Plan Development

Development within the Campus East District parallel to the freeway would be visible from the southbound US 101 freeway. While new buildings would obscure much of the existing view of the toe of San Bruno Mountain, views of the ridgeline would remain.

Table 4.5-2f: Visual Simulations of Specific Plan Development: Viewpoint 6

Viewpoint 6: Bayshore Boulevard at San Bruno Avenue in San Francisco, facing south

Existing View

A largely unrestricted view of San Bruno Mountain is available at the Bayshore Boulevard – San Bruno Avenue intersection, with intersection traffic controls and trees in the foreground.

Visual Simulation of Specific Plan Development

Three- to 4-story buildings in the foreground would retain views of San Bruno Mountain's main ridgeline that would be blocked by taller residential and commercial towers adjacent to the Bayshore Caltrain Station (left).

Table 4.5-2g: Visual Simulations of Specific Plan Development: Viewpoint 7

Viewpoint 7: Bayshore Boulevard north of Geneva Avenue, looking southeast

Existing View

Existing vegetation and intersection traffic controls are visible at the Bayshore Boulevard – Geneva Avenue intersection in the foreground of view of San Bruno Mountain ridgeline.

Visual Simulation of Specific Plan Development

Closely spaced 3- to 4-story residential buildings southeast of Geneva Avenue would appear as a solid mass and block a large portion of this view of San Bruno Mountain.

Table 4.5-2h: Visual Simulations of Specific Plan Development: Viewpoint 8

Viewpoint 8: Geneva Avenue at Talbert Street, facing east

Existing View

The area's existing flat terrain does not provide for views of the Bay from Geneva Avenue at Bayshore Boulevard.

Visual Simulation of Specific Plan Development

Views along the western approach to the Geneva Avenue bridge over the Caltrain right-of-way in the foreground would be framed by 3- to 4-story residential buildings in the foreground with towers 20+ stories in height adjacent to the west side of the Caltrain right-of-way, appearing as a solid mass of buildings that obscure part of the horizon.

Table 4.5-2i: Visual Simulations of Specific Plan Development: Viewpoint 9

Viewpoint 9: Bayshore Boulevard at Industrial Way, facing northeast

Existing View

Looking across Bayshore Boulevard at the existing Industrial Way. The historic brick Roundhouse is partially visible at right (left of the light brown building) in middle-ground and Bayview Hill is visible in background.

Visual Simulation of Specific Plan Development

Closely spaced 3- to 4-story residential buildings present a solid mass of development that would obscure most of the existing view. The existing industrial use in the right foreground is not owned by the Specific Plan applicant and is therefore shown as it exists, illustrating visual contrast.

Table 4.5-2j: Visual Simulations of Specific Plan Development: Viewpoint 10

Viewpoint 10: Mission Blue Drive off Guadalupe Canyon Parkway (Northeast Ridge), facing east

Existing View

Scenic views of the Bay are available over the top of existing development in the Brisbane Technology Park, with Candlestick Point, the Hunters Point Gantry Crane, and the East Bay hills visible beyond.

Visual Simulation of Specific Plan Development

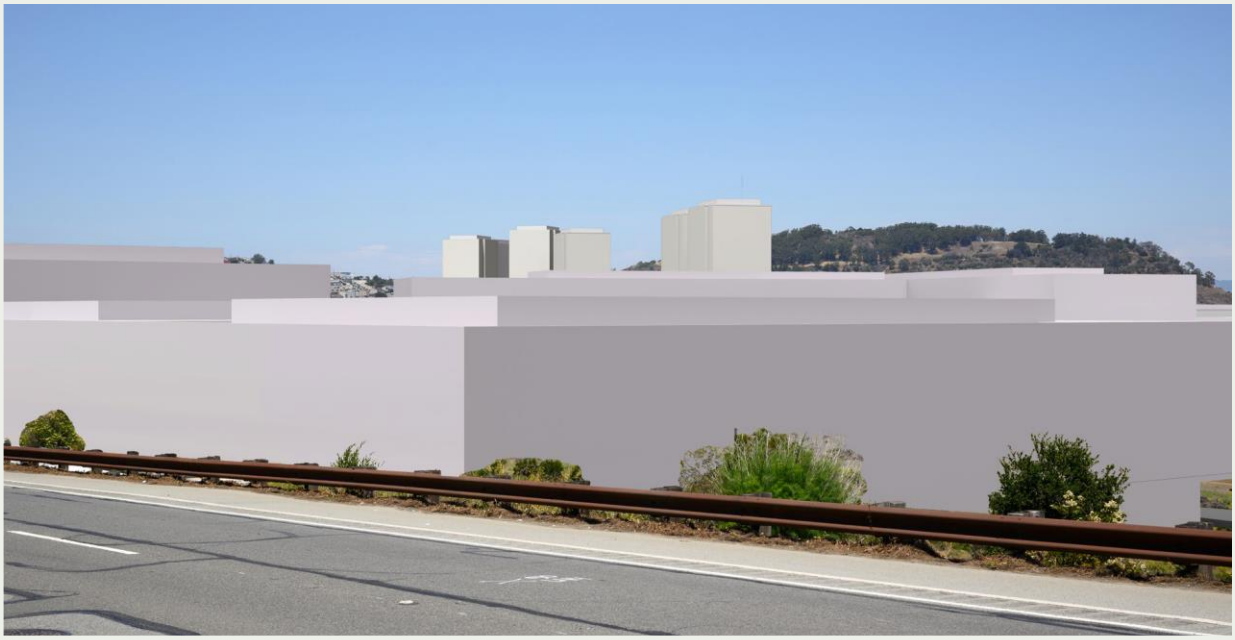
New buildings in the southern portion of the Baylands would not substantially impede views of the Bay or other visual landmarks, but would alter the middle-ground view from that of a largely undeveloped area to a continuation of existing mid-rise commercial development.

Table 4.5-2k: Visual Simulations of Specific Plan Development: Viewpoint 11

Viewpoint 11: Bayshore Boulevard near Guadalupe Canyon Parkway, facing northeast

Existing View

Views from Bayshore Boulevard north of Icehouse Hill are available across the former railyards in the western portion of the Baylands site, with existing commercial and industrial development and Bayview Hill beyond.



Visual Simulation of Specific Plan Development

Low- to mid-rise office buildings and towers 20+ stories in height would eliminate most of the existing view, rendering only the topmost portion of Bayview Hill still visible.

Table 4.5-2l: Visual Simulations of Specific Plan Development: Viewpoint 12

Viewpoint 12: Icehouse Hill, facing northeast

Existing View

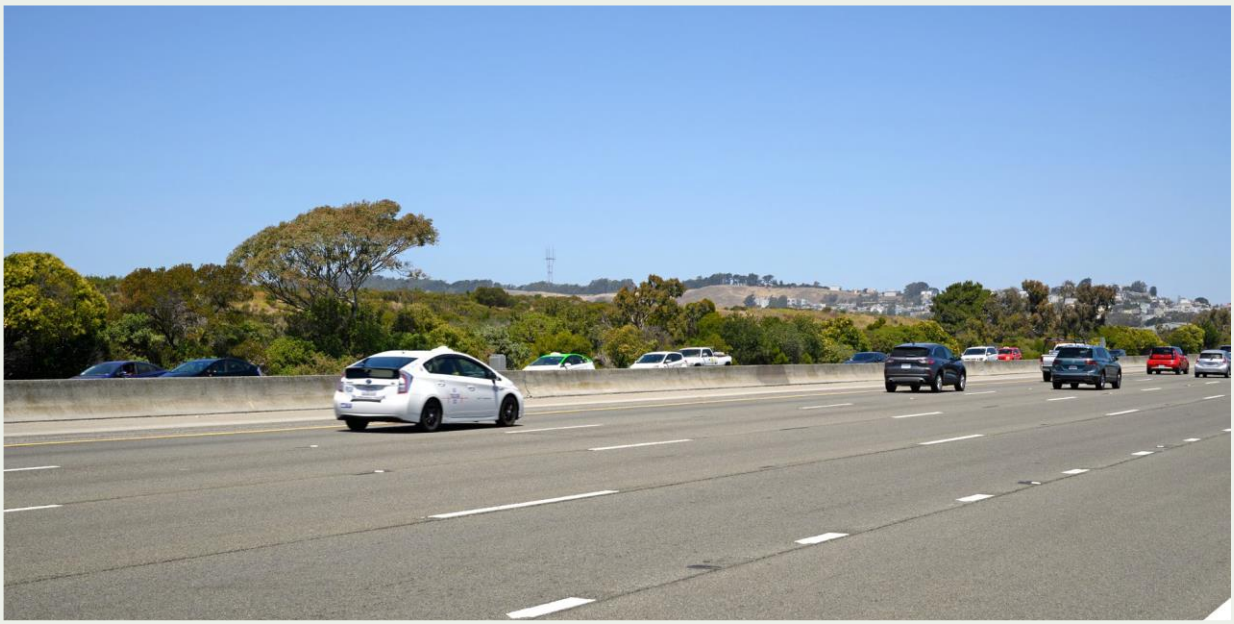
Views from the top of Icehouse Hill include the Bay, Candlestick Point, Bayview Hill, and high-rise buildings in San Francisco's financial district.

Visual Simulation of Specific Plan Development

New buildings would block a limited portion of the view of the Bay shoreline. Other views would be maintained. The towers 20+ stories in height along the west side of the Caltrain right-of-way would block a portion of long-distance views of downtown San Francisco financial district high-rise buildings.

Table 4.5-2m: Visual Simulations of Specific Plan Development: Viewpoint 13

Viewpoint 13: Northbound US 101 freeway south of Visitacion Creek, facing northwest



Existing View

Views from the US Highway 101 northbound lanes are limited to glimpses of San Bruno Mountain behind trees along the freeway right-of-way with Sutro Tower visible in the background.

Visual Simulation of Specific Plan Development

New buildings would block existing middle-ground and distant views. However, existing trees would remain in the foreground and would partially screen the new buildings.

Table 4.5-2n: Visual Simulations of Specific Plan Development: Viewpoint 14

Viewpoint 14: Northbound US 101 freeway north of the Brisbane Lagoon, facing northwest

Existing View

Views from the US Highway 101 northbound lanes at this location are of the former landfill within the Baylands, with McLaren Park and Sutro Tower visible in the background.

Visual Simulation of Specific Plan Development

New buildings would obscure portions of the existing distant views, but McLaren Park and Sutro Tower would remain partially visible in the distance. Adjacent to the freeway, the 55-acre solar field would be visible. Beyond the solar field, in the center of the photo, towers 20+ stories in height adjacent to the Caltrain right-of-way would be visible.

Table 4.5-2o: Visual Simulations of Specific Plan Development: Viewpoint 15

Viewpoint 15: North shore of Sierra Point facing northwest

Existing View

Scenic vistas from the north shore of Sierra Point near the Brisbane Marina include the Bay (foreground), San Bruno Mountain (to the left), and distant views of San Francisco hillsides (center and right), including Mount Davidson (left), McLaren Park (center) with Sutro Tower behind, and the toe of Bayview Hill (right).

Visual Simulation of Specific Plan Development

Taller buildings within the Baylands would partially block views of distant hillside landforms. However, views of San Bruno Mountain would not be impeded. Sutro Tower, parts of McLaren Park, and the toe of Bayview Hill would remain visible.

Table 4.5-2p: Visual Simulations of Specific Plan Development: Viewpoint 16

Viewpoint 16: Bayshore Boulevard north of Van Waters and Rodgers Road, facing north

Existing View

Views are available across the Brisbane Lagoon to the Baylands, with Bayview Hill (right) beyond. McLaren Park and development in Visitacion Valley are visible beneath the railroad signals.

Visual Simulation of Specific Plan Development

Taller Baylands buildings would partially obscure views of McLaren Park, although Bayview Hill would remain visible.

Table 4.5-2q: Visual Simulations of Specific Plan Development: Viewpoint 17

Viewpoint 17: Thomas Hill in Brisbane, facing north

Existing View

Elevated viewpoint provides a scenic vista of the Brisbane Lagoon, San Francisco Bay, Bayview Hill, and Candlestick Point.

Visual Simulation of Specific Plan Development

Low- to mid-rise development and the 55-acre solar farm within the eastern portion of the Baylands would be clearly visible. Scenic views of the Brisbane Lagoon, San Francisco Bay, Bayview Park, and Candlestick Point would remain intact.

Table 4.5-2r: Visual Simulations of Specific Plan Development: Viewpoint 18

Viewpoint 18: San Bruno Mountain Ridge Trail, facing northeast

Existing View

Scenic vista from the San Bruno Mountain Ridge Trail includes views of the Brisbane Lagoon, San Francisco Bay, Bayview Hill, Candlestick Point, and downtown San Francisco.

Visual Simulation of Specific Plan Development

Due to the elevation of this viewpoint, Baylands development would not obscure scenic views from the San Bruno Mountain Ridge Trail.

Significance Conclusion for Impact AES-1

As demonstrated by the visual simulations in **Table 4.5-2**, proposed Baylands development would impede scenic views of San Francisco Bay, Brisbane Lagoon, and San Bruno Mountain from several public viewpoints (Viewpoints 1, 4, 6, 7, 11, 15), primarily due to:

- The concentration of development within the western portion of the site causing Baylands development to appear as a solid mass of buildings; and
- Placement of taller buildings (20+ stories, 270 feet high) along the Caltrain right-of-way.

A significant impact would therefore result.

Program EIR Mitigation Measures

MM AES-1a: Maintain Views of Scenic Resources (Program EIR Mitigation Measure 4.A-1a). Development within 350 feet of the eastern boundary of the Baylands Specific Plan area (US Highway 101) shall be designed to avoid blockage of views of the Bay shoreline by limiting the height of buildings within 350 feet of US Highway 101 to a maximum height of 80 feet based on the grading plan included in the Brisbane Baylands Infrastructure Plan (January 2023).

Significance Conclusion with Implementation of Program EIR Mitigation Measures

As demonstrated in **Table 4.5-2**, implementation of Program EIR Mitigation Measure 4.A-1a and the Specific Plan's development standards would not effectively preserve scenic views of the Bay or San Bruno Mountain as seen from Central Brisbane, the Sunnydale neighborhood, US Highway 101, or the Candlestick Point State Recreational Area shoreline.

Thus, a significant impact would remain, and additional mitigation would be required.

Additional Mitigation Measures

MM AES-1b: Additional Provisions to Maintain Views of Scenic Resources. To further reduce loss of scenic views of San Francisco Bay and San Bruno Mountain, building heights within the area west of the Caltrain right-of-way shall be limited to no more than:

- 12 stories (150 feet) for office buildings
- 8 stories (100 feet) for residential buildings

MM AES-1c: View Corridors. The Specific Plan shall be revised to incorporate objective development standards intended to break up views of solid masses of buildings from Bayshore Boulevard and the US 101 freeway by providing for view

corridors either through the Baylands or to internal open space areas/open areas such that the public would be able to view scenic resources including San Bruno Mountain and its adjacent ridgelines, San Francisco Bay, the Brisbane Lagoon, and internal open space/open areas in between Baylands buildings.

Significance Conclusion with Implementation of all Mitigation Measures

Mitigation Measures MM AES-1a and MM AES-1b would reduce the significant impacts resulting from the towers 20+ stories in height proposed along the west side of the Caltrain right-of-way, which partially block views of the Bay and San Bruno Mountain. Mitigation Measures MM AES-1a and MM AES-1b would limit development within the western portion of the Baylands so office buildings would not exceed 12 stories (or 150 feet), and residential buildings would not exceed 8 stories (or 100 feet) for residential buildings such that public views of scenic resources would not be substantially blocked. Similarly, the significant visual impacts associated with the proposed buildings up to 100 feet in height east of the Caltrain right-of-way would be reduced with implementation of Mitigation Measure MM AES-1a, as development would be limited to 6 stories (80 feet) in height. The reduction in building height would allow the public to view more of San Bruno Mountain and its ridgelines, the San Francisco Bay, and the Brisbane Lagoon. Further, Mitigation Measure MM AES-1c would reduce significant impacts by providing view corridors for the public to view scenic resources between Baylands buildings. These view corridors would break up solid masses of buildings such that public views of scenic resources would not be substantially or completely blocked. Thus, Mitigation Measures MM AES-1a through MM AES-1c would reduce Impact AES-1 to less than significant.

b. Impact AES-2: Physical Effects on Scenic Resources

Methodology for Determining Significance

Methodology for Evaluating Effects on Scenic Resources, including those within a Scenic Highway Corridor

The significance determination related to damaging scenic resources within a state scenic highway first considers whether the Specific Plan area lies within the viewshed of a state scenic highway. If this condition is not met, no impact would occur related to a state scenic highway.

If the Specific Plan area lies within the viewshed of a state scenic highway, analysis would be undertaken to determine the potential for development permitted by the proposed Specific Plan to remove or alter scenic resources within the scenic highway corridor.

Methodology for Evaluating Effects on Scenic Resources Outside of a Scenic Highway Corridor

The significance determination related to damaging scenic resources outside of a state scenic highway involves evaluating whether the Baylands Specific Plan would have adverse effects on specific scenic resources. Threshold AES-2 expands the scenic resources inventory to be evaluated beyond those located within a state scenic highway corridor to the specific scenic resources that could be affected by Baylands development. These include:

- On-site Scenic Resources
    - Icehouse Hill
    - Visitacion Creek
    - Brisbane Lagoon
- Off-site Scenic Resources
    - San Bruno Mountain and its adjacent ridgelines
    - San Francisco Bay

Development that would be permitted by the Baylands Specific Plan is evaluated for its potential to substantially remove or alter the visual quality of these resources. Development would be considered to be a significant impact if it would degrade the natural character of Icehouse Hill, Visitacion Creek, or the Brisbane Lagoon as the result of:

- Creation of large, manufactured slopes on Icehouse Hill due to grading for trails or for adjacent land uses and infrastructure;
- Channelization of Visitacion Creek with a concrete structure; or
- Removal of natural vegetation or construction of substantial manufactured features along the edges of the Brisbane Lagoon.

Although the 2025 Specific Plan proposes a trails system on Icehouse Hill along with conceptual trail routing, no information is provided in the Specific Plan regarding trail width or other design features. For analysis purposes, it is reasonably assumed that trails on Icehouse Hill would be consistent with US Forest Service trail design guidelines.[124] Icehouse Hill trails are therefore assumed to have a minimum width of 36 inches with 60-inch-wide passing areas provided approximately every 1,000 feet along the trail.

[124] US Forest Service Trails Accessibility Guidelines can be found at https://fs.usda.gov/t-d/pubs/htmlpubs/htm06232801/page25.htm.

Impacts Associated with Off-Site Project Components

Lands associated with the Bayshore Mobility Plan, relocated Fire Station No. 81, conversion of the existing Bayshore School to an elementary school, and off-site infrastructure improvements would occur outside of state scenic highways, and do not include any scenic resources other than trees, impacts to which are addressed in Impact AES-3.

Impact Assessment

Effects on Scenic Resources within a Scenic Highway Corridor

The nearest California Scenic Highway to the Baylands site is the Interstate 280 (I-280) freeway, approximately four miles to the west of the Specific Plan area. San Bruno Mountain and the adjacent ridgeline block views between the Baylands and the I-280 scenic corridor. Due to the lack of a designated (or eligible) scenic highway within or near the Baylands, development permitted by the proposed Specific Plan would not remove or damage scenic resources within a state scenic highway corridor.

Effects on Scenic Resources Outside of a Scenic Highway Corridor

The Baylands Specific Plan provides for both preservation of and improvements to existing scenic resources within the site, including Icehouse Hill, Brisbane Lagoon, and Visitacion Creek. The Visitacion Creek corridor, Icehouse Hill, and the edges of Brisbane Lagoon all would be improved, including restoration and enhancement of wetland and habitat areas as described in EIR Section 4.6, *Biological Resources*.

Construction of Manufactured Slopes on Icehouse Hill

Construction of trails on Icehouse Hill would require grading and construction of manufactured slopes, which would vary in size and visibility depending on their location in relation to public vantage points and the steepness of natural slopes along the trail route. Assuming 2:1 (horizontal to vertical) cuts/fills, typical trail construction of a 3- to 5-foot-wide trail on Icehouse Hill would disturb up to a 9- to 15-foot-wide cross-section with manufactured (cut and fill) slopes up to 6 to 10 feet high.

The relocation of Mission Blue Nursery to the existing police shooting range will use existing access routes for roadway and utility access and not require construction of new of larger manufactured slopes on Icehouse Hill.

Channelization of Visitacion Creek with a Concrete Structure

Visitacion Creek is proposed to remain an open natural channel with restored and enhanced habitat areas. While trails are proposed along the margins of Visitacion Creek, large, manufactured slopes would not be required.

Removal of Natural Vegetation or Construction of Substantial Manmade Features along the Edges of the Lagoon

Lagoon Park, which is to be developed along the northern edge of the Brisbane Lagoon, will primarily consist of restored and enhanced habitat. Existing riprap is proposed to be filled in and vegetated with wetland vegetation. Biological resources analyses set forth in Section 4.6 demonstrated that proposed park improvements would be compatible with biological values and functions of the lagoon's northern edge.

Proposed trails and recreational features within the park would also be visually compatible with the area's visual character.

San Francisco Bay Trail Extension

The Baylands Specific Plan also provides for extending the San Francisco Bay Trail through the Baylands site, which would preserve a 100-foot shoreline band areas around the Visitacion Creek corridor and Brisbane Lagoon, as well as public access, including visual access, to the Brisbane Lagoon. Views of San Francisco Bay from the trail, which are currently blocked by existing vegetation within the freeway right-of-way would remain blocked.

As shown in **Figure 3-5**, the Specific Plan permits some new development east of Sierra Point Parkway and the San Francisco Bay Trail extension near Geneva Avenue in the northern portion of the site. Such development could obstruct views of the Bay from the trail depending on its location and height. However, preservation of habitat areas within the Visitacion Creek corridor and along the north shore of Brisbane Lagoon would include the 100-foot shoreline band areas around these features, which are under the jurisdiction of the Bay Conservation and Development Commission to ensure public access—including visual access—to the Bay.

Significance Conclusion for Impact AES-2

Within a State Scenic Highway Corridor

Due to the lack of a designated (or eligible) scenic highway within of adjacent to the Baylands, development permitted by the proposed Specific Plan would not substantially remove or alter scenic resources within a state scenic highway corridor.

Outside of a State Scenic Highway Corridor

The Baylands Specific Plan provides for preservation and improvement of existing scenic resources within Visitacion Creek and along the north shore of Brisbane Lagoon, including restoration of wetland and habitat areas that would retain a natural rather than manufactured character. In addition, by extending the San Francisco Bay Trail through the site, the Baylands Specific Plan would have a beneficial effect by preserving 100-foot shoreline band areas around the Visitacion Creek corridor and Brisbane Lagoon and providing public access—including visual access—to the lagoon.

Habitat areas on Icehouse Hill would be preserved, and the relocated Mission Blue Nursery would be located on an existing flat pad and use an existing access road.

A significant impact would nevertheless result since trails on Icehouse Hill would require manufactured slopes typically up to 6 to 10 feet high, with higher, more visually prominent slopes constructed where trails would traverse along steep hillsides. Newly constructed trails on Icehouse Hill would thus be seen as long "ribbons" of disturbed bare ground.

Program EIR Mitigation Measures

The Program EIR did not propose any mitigation measures addressing the aesthetic impacts of trail construction on Icehouse Hill.

Significance Conclusion with Implementation of Program EIR Mitigation Measures

By requiring trail design to minimize loss of native plants, Program EIR Biological Resources Mitigation Measures 4.C-1a through 4.C-1c (included in this EIR as Mitigation Measures MM BIO-1a through MM BIO-1c) would reduce but not necessarily avoid the visual impacts of trail construction.

Thus, a significant impact would result.

Additional Mitigation Measures

MM AES-2: Design and Restoration of Manufactured Slopes on Icehouse Hill. Trails on Icehouse Hill shall be limited to the minimum necessary width for safe two-way travel (typically 36 inches wide with 60-inch-wide passing areas approximately every 1,000 feet along the trail). Manufactured slopes constructed for trails on Icehouse Hill shall be revegetated with non-irrigated, non-invasive vegetation that is visually and biologically compatible with adjacent existing natural vegetation. Such revegetation shall use plant material of varying heights to create an undulating appearance.

Where manufactured slopes over 10 feet in height cannot be avoided, slopes shall be contoured or undulated to produce a naturalized appearance, unless such slope design would conflict with geotechnical recommendations approved by the City Engineer and/or require higher slopes that would disturb sensitive vegetation.

Significance Conclusion with Implementation of All Mitigation Measures

The combination of Mitigation Measure MM AES-2 and Mitigation Measures MM BIO-1a through MM BIO-1c would ensure that Icehouse Hill trails would minimize site grading, removal of vegetation, and resulting visual impacts.

Impact AES-2 would be less than significant with mitigation incorporated.

c. Impact AES-3: Consistency with Visual Quality Policies and Programs

Methodology for Determining Significance

Because it is recognized that any one person's assessment of whether the visual changes that would result from Specific Plan development would be comparatively better (substantially improved) or worse (substantially degraded) than existing conditions, the following evaluation focuses on consistency with adopted visual quality policies and programs. This analysis recognizes that well-designed and well-landscaped urban development that is *compatible* in scale and appearance with its surroundings need not be *the same as* but can be substantially *different* than the surrounding visual area's visual character.

This analysis considers consistency with the City's visual quality-related policies and programs including findings required for approval of a design permit by the Brisbane Planning Commission. As such, analysis considers the City's General Plan policies that pertain to aesthetic and visual resources, including preservation of the ridgelines and hilltops in their open state, enhancement of the natural landform, and biotic values of Icehouse Hill. The analysis also considers:

- Municipal Code Chapter 17.42 provides design permit requirements for non-residential development, including preservation of significant public views of San Francisco Bay, Brisbane Lagoon, and San Bruno Mountain, as well as integration of the orientation and location of buildings and structures to maintain a compatible relationship to adjacent development.
- Municipal Code Chapter 17.45, which provides objective development standards for residential development.

As required by Program EIR Mitigation Measure 4.A-3, the Specific Plan provides design guidelines for each building type proposed within the Baylands. These guidelines were reviewed to determine the extent to which Baylands development would facilitate or impede attainment of a complementary visual relationship between Baylands development in order to be consistent with the applicable policies and regulations governing scenic quality set forth in the Brisbane General Plan and Municipal Code Chapter 17.42 and 17.45.

Off-site, above-ground improvements including the Bayshore Mobility Plan, relocation of Fire Station No. 81, and conversion of the existing Bayshore School to an elementary school would be constructed in compliance with local and state requirements. Improvements at the Martin Substation and other above-ground electrical improvements would be constructed per applicable PG&E and state design requirements. Trenching and installation of off-site utility lines would not be subject to aesthetic design standards.

A significant impact would result if Baylands development would:

- Propose building heights, massing, or other features that would conflict in character with existing or planned development surrounding the Baylands and thereby preclude consistency of site-specific development projects with the required findings for a design permit set forth in Municipal Code Section 17.42.040;
- Substantially alter the topography of Icehouse Hill;
- Eliminate or substantially reduce views of San Francisco Bay or the Brisbane Lagoon from public viewpoints;
- Eliminate or substantially reduce views of San Bruno Mountain from public viewpoints; or
- Present a cluttered or unkept appearance at entrances to the City and Central Brisbane, including interchanges on the US 101 freeway, Geneva Avenue at Bayshore Boulevard, and Tunnel Avenue between Bayshore Boulevard and its intersection with Lagoon Road.

Impact Assessment

As described in Chapter 3, *Project Description*, Specific Plan buildout would result in new buildings and open space amenities throughout the Baylands, as summarized below.

- Baylands features that would be replaced
    - Older industrial uses along Industrial Way;
    - Temporary and interim uses along Tunnel Avenue;
    - Existing and previous uses of the former landfill area, such as recycling operations and associated earth-moving and soil processing equipment; temporary soil piles, and holding ponds.
- Baylands features that would replace the above features
    - Substantial new residential and commercial buildings ranging in permitted height from 40 to over 250 feet;
    - An extensive roadway system with street trees;
    - Parks and landscaping;
    - Habitat restoration within Visitacion Creek and along the northern shore of the Brisbane Lagoon; and
    - Large-scale infrastructure and public facilities, including a water recycling facility, water storage tank, 55-acre solar generation field, electrical switching substation, utility-scale battery storage, combined middle/high school, and a new fire station.

Baylands development would provide physical and visual access to expanded habitat and conservation areas, and new parks and recreational facilities, along with restoration and adaptive reuse of the derelict historic Roundhouse structure. To the extent that their functionality would not be compromised, rooftop solar and battery storage as well as other roof-mounted and HVAC equipment would be screened pursuant to existing City design permit and code requirements, including General Plan Policies LU.2, LU.9, and BL.10; General Plan Programs LU.6a. LU.8a, and BL.3b; and Municipal Code Section 17.42 and 17.45.

Overall, Specific Plan development would urbanize the Baylands with substantially greater development intensity and buildings that are taller, larger, and more abundant and closely spaced than existing buildings within Central Brisbane and nearby portions of Daly City and San Francisco. The towers 20+ stories in height proposed along the Caltrain rail line from the Bayshore Station south would be the tallest buildings within Brisbane and adjacent developed areas in Daly City and San Francisco, would be visually incongruous with the scale and character of development adjacent to the Baylands, and would block views of the Bay and San Bruno Mountain from public viewpoints. Other buildings within the Baylands would present a solid mass from public viewpoints, blocking public views of the Bay and open space/open areas within the site. Therefore, the Specific Plan would conflict in character with development surrounding the Baylands and not maintain a compatible visual relationship to adjacent development.

Baylands development would not alter the topography of Icehouse Hill. As documented in **Table 4.5-2**, Baylands development would impede scenic views of San Francisco Bay, Brisbane Lagoon, and San Bruno Mountain from several public viewpoints due to the concentration of development within the western portion of the site and the number of taller (20+ story) buildings proposed along the Caltrain right-of-way. **Table 4.5-2** also documents several instances where Baylands development would present a solid mass of buildings, particularly at the intersection of Geneva Avenue and Bayshore Boulevard, that would be partially broken up by the architectural differences of individual buildings.

In addition, the location of large-scale infrastructure facilities, such as the electrical switching substation, within the Sustainable Infrastructure area north of the Geneva Avenue extension could present a cluttered or unkept appearance at the entrance to the Baylands and City of Brisbane from the US 101 freeway interchange in the northeastern portion of the Baylands if not appropriately designed and screened.

Consistency of Specific Plan design guidelines with the required findings for a non-residential design permit, enumerated in Municipal Code Section 17.42.040 is presented in **Table 4.5-3**.

Table 4.5-3: Specific Plan Consistency with Required Findings for Non-Residential Design Permits

Required Findings for a Design Permit	Specific Plan Consistency Analysis
A. The proposed development is consistent with the general plan and any applicable specific plan.	All Baylands development would be required to be consistent with the Brisbane General Plan and Baylands Specific Plan.
B. The proposal's scale, form, and proportion are harmonious, and the materials and colors used complement the project.	As discussed in Impact AES-1, the Specific Plan would permit development that appears as a solid mass from adjacent public streets and blocks views of San Bruno Mountain and San Francisco Bay.
C. The orientation and location of buildings, structures, open spaces and other features integrate well with each other and maintain a compatible relationship to adjacent development.	As discussed in Impact AES-1, the Specific Plan would permit development that appears as a solid mass from adjacent public streets and blocks views of San Bruno Mountain and San Francisco Bay.
D. Proposed buildings and structures are designed and located to mitigate potential impacts to adjacent land uses.	Specific Plan development would be subject to the mitigation measures set forth in this EIR, which mitigate impacts to adjacent land uses.
E. The project design takes advantage of natural heating and cooling opportunities through building placement, landscaping and building design to the extent practicable, given site constraints, to promote sustainable development and to address long term affordability.	The Specific Plan includes a sustainability program that requires all-electric buildings supplied from 100 percent renewable sources. Baylands development would produce a substantial portion of its electrical demand on-site, provide 30 MW of distributed battery storage, and reduce energy consumption.
F. For hillside development, the proposal respects the topography of the site and is designed to minimize its visual impact. Significant public views of San Francisco Bay, the Brisbane Lagoon and San Bruno Mountain State and County Park are preserved.[125]	The trail system to be constructed on Icehouse Hill would require manufactured slopes along most of its length but would not alter the hill's overall topography. As documented in Impact AES-1, the Specific Plan would permit development that blocks views of San Bruno Mountain and San Francisco Bay.
G. The site plan minimizes the effects of traffic on abutting streets through careful layout of the site with respect to location, dimensions of vehicular and pedestrian entrances and exit drives, and through the provision of adequate off-street parking. There is an adequate circulation pattern within the boundaries of the development. Parking facilities are adequately surfaced, landscaped and lit.	As discussed in Impacts TRA-3 and TRA-4, the 4-lane cross-section proposed for the Geneva Avenue bridge presents safety concerns at intersections on the west side of the bridge for motorists, bicyclists, and pedestrians. In addition, Roundhouse Circle, as well as East and West Park Boulevard would not meet City design standards.
H. The proposal encourages alternatives to travel by automobile where appropriate, through the provision of facilities for pedestrians and bicycles, public transit stops and access to other means of transportation.	The Specific Plan provides for extensive pedestrian and bicycle facilities, enhances access to the Caltrain Bayshore Station, and proposes a shuttle system throughout the site, connecting the Baylands to the Caltrain Station and other locations within Brisbane.
I. The site provides open areas and landscaping to complement the buildings and structures. Landscaping is also used to separate and screen service and storage areas, break up expanses of paved area and define areas for usability and privacy. Landscaping is generally water conserving and is appropriate to the location. Attention is given to habitat protection and wildland fire hazard as appropriate.	The Specific Plan proposes a 157-acre system of habitat restoration and enhancement, parks, trails, and recreational amenities. Landscape irrigation would exclusively use recycled water from an on-site water recycling facility.

[125] The requirement for findings related to public views or San Francisco Bay, the Brisbane Lagoon, and San Bruno Mountain State and County Park is not limited to hillside development projects.

Required Findings for a Design Permit	Specific Plan Consistency Analysis
J. The proposal takes reasonable measures to protect against external and internal noise.	The Baylands geologic setting and proposed intensity of development necessitates pier foundations for most buildings within the site.
K. Consideration has been given to avoiding off-site glare from lighting and reflective building materials.	As discussed in Impact AES-5, the Specific Plan requires placement of reflective materials on building roofs as an energy conservation measure. Additional sources of glare include above-ground infrastructure, public art installations, signage and thematic elements.
L. Attention is given to the screening of utility structures, mechanical equipment, trash containers and rooftop equipment.	Specific Plan design guidelines provide for screening of mechanical equipment, trash containers, and rooftop equipment. The Specific Plan does not, however, provide for screening of utility structures along the north side of Geneva Avenue east of Caltrain.
M. Signage is appropriate in location, scale, type and color, and is effective in enhancing the design concept of the site.	The Specific Plan provides guidelines for signage design.
N. Provisions have been made to meet the needs of employees for outdoor space.	The Specific Plan provides for parks and trails in proximity to commercial office uses. Design guidelines permit but do not require use of roof areas as outdoor space for employees.

As indicated in **Table 4.5-3**, the Baylands Specific Plan would permit development for which required finding for approval of a design permit could not be made. For example, the requirement for placement of reflective materials on roofs of many buildings would preclude approval of a design permit unless those reflective materials were removed.

Significance Conclusion for Impact AES-3

Specific Plan development would urbanize the Baylands with substantially greater development intensity that would be visually incongruous with the scale and character of adjacent developed areas in Daly City and San Francisco. Baylands buildings that would be taller, larger, more closely spaced, and include a row of towers 20+ stories in height along the Caltrain rail line that would be the tallest buildings within Brisbane and adjacent developed areas.

As documented in the discussion of Impact AES-1 and documented in **Table 4.5-2**, Baylands development would impede scenic views of San Francisco Bay, Brisbane Lagoon, and San Bruno Mountain from several public viewpoints and present a solid mass of buildings, particularly at the intersection of Geneva Avenue and Bayshore Boulevard. In the absence of specific screening requirements in the Specific Plan for facilities within the Sustainable Infrastructure area along the north side of Geneva Avenue, Specific Plan development could present a cluttered or unkept appearance at the entrance to the Baylands and City of Brisbane. Specific Plan design guidelines would permit development inconsistent with the standards of Municipal Code Section 17.42.040.

Thus, a significant impact would result.

Program EIR Mitigation Measures

Program EIR Mitigation Measures 4.A-1a (Maintain Views of Scenic Resources), 4.A-3 (Outdoor Lighting Sources), and 4.A-4b (Daytime Glare) have been carried forward from the Program EIR as Mitigation Measures MM AES-1a, MM AES-4a, and MM AES-5, respectively.

Significant Conclusion with Implementation of Program EIR Mitigation Measures

A significant impact would remain with implementation of Program EIR mitigation measures.

- Implementation of 2025 Specific Plan development standards and Program EIR Mitigation Measure 4.A-1a would not effectively preserve scenic views of the Bay or San Bruno Mountain as seen from public viewpoints.
- The analysis of Impact AES-4, below, concludes that Program EIR Mitigation Measure AES-4a would not be consistent with Brisbane's dark sky ordinance, Municipal Code Chapter 15.88.
- In addition, the analysis of Impact AES-5, below, determines even though Measure 4.A-4b would prohibit mirrored glass, daytime glare could result from metal surfaces on above-ground infrastructure, signage, outdoor public art installations, concave surfaces that concentrate reflective light, and reflective façade materials that slope back from the ground surface at less than a 90^{o} angle that can reflect high-angle sunlight along the ground surface.

Additional Mitigation Measures

Mitigation Measure AES-1b limits building heights to reduce loss of scenic views of San Francisco Bay and San Bruno Mountain and thereby maintain views of scenic resources.

Mitigation Measure AES-1c requires provision of view corridors for the public to view scenic resources in between Baylands buildings.

MM AES-3: **Visual screening of infrastructure along the north Side of Geneva Avenue.** The design of infrastructure facilities and westbound right-of-way along Geneva Avenue between the US 101 freeway and the Geneva Avenue bridge shall be provided with a combination of berms, decorative walls, and landscaping to screen views of infrastructure facilities along the north side of the roadway in accordance with the required findings for a design permit set forth in Brisbane Municipal Code Chapter 17.42.

Significance Conclusion with Implementation of all Mitigation Measures

Mitigation Measures MM AES-1a through MM AES-1c, along with MM AES-3, would achieve consistency with visual quality-related policies and programs set forth in the Brisbane General Plan and Municipal Code, thereby attaining a complementary visual relationship between Baylands development and:

- Existing and planned development surrounding the Baylands;
- The area's overall topography;
- Brisbane Lagoon;
- San Bruno Mountain;
- San Francisco Bay; and
- Entrances to Central Brisbane.

This would be accomplished by reducing the height of the tallest buildings within the Baylands and providing view corridors for the public to view scenic resources and open space/open areas between buildings within the Baylands.

Mitigation Measure MM AES-3 would mitigate impacts related to a lack of screening of infrastructure facilities along the north side of Geneva Avenue by providing landscaping along this important roadway entry to the City, thereby attaining a complementary visual relationship between the Specific Plan and surrounding development as well as the area's overall topography.

Impact AES-3 would therefore be less than significant with mitigation incorporated.

d. Impact AES-4: Night Lighting

Methodology for Determining Significance

The evaluation of nighttime lighting focuses on changes in nighttime illumination levels that would result from the Specific Plan and the extent to which such new sources of light would adversely affect nighttime views or activities. Analysis considers adverse effects of scenic vistas of stars and distant lights against a dark night sky, as well as new lighting sources, which can cause light trespass onto adjacent properties that interferes with nighttime activities including vision, sleep, privacy, and the biological functions of habitat areas. Thus, two types of nighttime lighting are analyzed: light trespass and sky glow.

Light Trespass

Analysis is undertaken to determine whether the Specific Plan would permit night lighting to exceed the performance standards set forth in the first three bullet points of Threshold AES-4. Such nighttime lighting would interfere with activities such as vision, sleep, privacy, and general enjoyment of the natural nighttime condition. This includes evaluating the extent to which the Baylands Specific Plan implements Program EIR Mitigation Measure 4.A-4a, which defined and quantified "light trespass." Impacts on biological resources that could result from night lighting are addressed in threshold BIO-1.

Sky Glow

The determination of significance related to sky glow follows guidelines derived from Municipal Code Chapter 15.88, Brisbane's dark sky ordinance and the "Outdoor Lighting - Municipal Ordinance Template" developed by DarkSky International (formerly known as the International Dark Sky Association). Thus, the impact analysis evaluates the Specific Plan's effect on the community's dark night sky using the following standards.[126]

- Residential parcels: 1.75 lumens per square foot of developed lot area;
- Commercial, amenities, public facilities, and sustainable infrastructure parcels: 3.5 lumens per square foot of hardscape;
- Parks and open space areas: 0.35 lumens per square foot of trail or hardscape area;
- No exterior lighting to be emitted either directly or indirectly from a fixture above a horizontal plane from the bottom of the lamp;
- All fixtures to be fully shielded; and
- All exterior lighting to have a correlated color temperature less than 3,000 Kelvin unless otherwise exempted by the provisions of Municipal Code Chapter 15.88.

Nighttime lighting that would exceed these standards or otherwise be inconsistent with the provisions of Brisbane Municipal Code Chapter 15.88 would constitute a significant impact for which mitigation would be required.

[126] Municipal Code Section 15.88.040 E2 exempts "construction or emergency lighting provided such lighting is temporary, necessary, and is discontinued immediately upon completion of the construction work or termination of the emergency; provided, however, construction or emergency lighting shall be deployed to comply with the ordinance to the greatest practical extent." Permitted hours for construction activities are also regulated by Municipal Code Section 8.28.050, which limits construction hours to between 7:00 a.m. and 7:00 p.m. on weekdays and 9:00 a.m. and 7:00 p.m. on weekends and holidays.

Safety Hazards for Motorists

Analysis is undertaken to determine whether the Specific Plan would permit light sources to be directed beyond the ground surface intended to be lighted onto area roadways or the US 101 freeway. Should nighttime lighting within the Baylands, other than streetlights, be directed onto area roadways or the US 101 freeway such that light trespass standards for residential use are exceeded, a significant impact would result.

Impact Assessment

Construction Impacts

Baylands grading and construction activities associated with on- and off-site improvements would be required to comply with Section 8.28.060 of the Brisbane Municipal Code, which limits construction hours to between 7:00 a.m. and 7:00 p.m. on weekdays and 9:00 a.m. and 7:00 p.m. on weekends and holidays. Construction of off-site infrastructure (e.g., recycled water lines within the City of South San Francisco) would be required to comply with the construction hours and other requirements of the jurisdiction within which construction would occur.

Section 8.28.060 of the Brisbane Municipal Code would limit construction to daytime hours during summer months. However, during winter and other non-summer months, construction activities could occur between dusk and 7:00 p.m., which would employ temporary lighting to illuminate construction activities. Maintenance of construction vehicles, including fueling, cleaning, and minor repairs, could also occur prior to or after the completion of construction activities throughout the year, which would involve temporary lighting to illuminate maintenance work areas.

Outdoor lighting sources such as floodlights, spotlights, and/or headlights associated with construction equipment and trucks hauling materials and equipment before or after the workday typically accompany nighttime construction activities. Increased nighttime lighting effects would occur intermittently throughout the duration of Baylands construction activities and would cease upon completion of Baylands development.

Section 15.88.040 E2 of the City's Dark Sky ordinance exempts "construction or emergency lighting provided such lighting is temporary, necessary, and is discontinued immediately upon completion of the construction work or termination of the emergency; provided, however, construction or emergency lighting shall be deployed to comply with the ordinance to the greatest practical extent." Thus, lighting for nighttime construction, when permitted, would be required to be fully shielded with no exterior lighting emitted either directly or indirectly from a fixture above a horizontal plane from the bottom of the lamp.

Because construction lighting, while bright, is highly focused on the particular area undergoing work, nighttime light from construction light sources would be intrusive for adjacent light-

sensitive uses but would not be anticipated to affect light-sensitive uses located farther away, nor would construction activities occur at a time that sky glow would adversely affect the area's dark night sky. The greatest construction light impacts would be experienced within the residential portions of the Baylands following initial occupancy of dwelling units that would have a direct line of sight to construction of adjacent residential and commercial uses and construction maintenance activities occurring after dark during non-summer months.

In addition, construction light sources located at grade, including safety lighting, emergency lighting, or temporary supplemental lighting used for construction maintenance within the Baylands, may cause spill light beyond the construction site boundary onto residences both outside and within the Baylands.

Long-Term Post-Construction Impacts

Light Trespass

Development permitted by the Specific Plan would create substantial new nighttime lighting, including street lighting; building illumination; security lighting; parking lot lighting; and landscape, park, and trail lighting, as well as light emanating from building interiors passing through windows.

Proposed residential uses within the northwestern portion of the Baylands would be considered sensitive with respect to nighttime lighting, as would be the Little Hollywood neighborhood and future residential development in the Baylands North project within San Francisco. Habitat areas within and adjacent to the Baylands would also be considered a sensitive use.

Nighttime lighting of commercial buildings, including accent lighting and light displays, would largely occur away from existing sensitive residential uses in Brisbane and San Francisco. Nighttime lighting of the relocated fire station would occur within an industrial area away from residential uses. However, some future residential development within the Baylands and the immediately adjacent portions of San Francisco would be subject to nighttime lighting associated with Baylands commercial and residential development, as well as park and trail uses. Area roadways and habitat areas, including Visitacion Creek, Lagoon Park, the Ecological Park, and the lower portions of Icehouse Hill would also be subject to potential light trespass.

Nighttime lighting of residential, recreational, and habitat areas within the Baylands would be subject to the provisions of Baylands Specific Plan Section 3.8, which explicitly incorporates Program EIR Mitigation Measure 4.A-4a. Thus, nighttime lighting would be directed downward, direct beam lighting would not be directed onto windows of nearby residential and hotel uses, and light trespass onto nearby properties and habitat areas would not exceed the performance standards contained in Significance Threshold AES-4.

Nighttime lighting associated with the Bayshore Mobility Plan would consist of standard street lighting that would be directed onto the roadway. Nighttime lighting associated with the relocated fire station would occur within an industrial area that would not be occupied at night.

Sky Glow

While the Specific Plan includes standards for outdoor lighting to reduce sky glow, these standards would nevertheless permit Baylands nighttime lighting to exceed the standards of Brisbane's dark sky ordinance, Municipal Code Chapter 15.88, and emit light to be projected above the horizontal plane from the bottom of the lamp.

- The Specific Plan requirement that nighttime lighting not be emitted above a 90-degree angle applies only to parking lots, recreational areas, walkways, and trails. Because it does not include explicit standards or requirements for other types of lighting within the Specific Plan area, nighttime lighting within the Baylands would permit decorative uplighting of signage, buildings, and landscaping within site-specific developments, as well other light sources to be emitted either directly or indirectly from a fixture above a horizontal plane from the bottom of the lamp.[127]
- The Specific Plan includes a requirement for light fixtures to be selected that "produce a warm light" but does not provide an explicit standard. Thus, Baylands lighting could exceed the requirement of Municipal Section 15.88.060 D that the "correlated color temperature of all outdoor lighting shall be three thousand (3,000) Kelvin or less except for seasonal lighting."
- The Specific Plan requires compliance with mandatory CALGreen light reduction standards as well as at least one the following measures:

    (i) Use of exterior light fixtures that prevent light trespass, and direct light downwards instead of up to the sky and avoid use of blue light.

    (ii) When interior or exterior lights must be left on at night, the operator of the buildings shall examine and adopt alternatives to bright, all-night, floor-wide lighting, which may include:

        - Installing motion-sensitive lighting.
        - Using desk lamps and task lighting.
        - Reprogramming timers.
        - Use of lower-intensity lighting.

[127] The Specific Plan requires entry monuments to be lighted with low-level lights with concealed fixtures but does not limit the brightness of such signs or prohibit uplighting of monument signs. In addition, the Specific Plan requires light fixtures that "focus the light downward onto the pedestrian zone" to be selected but does not explicitly prohibit light emitted above 90 degrees except for lighting of parking lots, recreational areas, walkways, and trail lighting.

- Internal silvering of the globe or external opaque reflectors shall be provided to direct light away from preserved wetland or open water habitats.
- Private sources of illumination around homes shall also be directed and/or shaded to minimize glare into these habitats.

Effects on Nocturnal Species

Light spillage from nighttime lighting of development within the Baylands into habitat areas would have a negative effect on nocturnal species.

Plants and animals are typically attuned to the 24-hour seasonal cycle of light and dark. Mating behaviors, sleep, and predation are all determined by the length of nighttime darkness. Introducing artificial nighttime lighting into habitat areas can disrupt these activities. Artificial nighttime lighting can disrupt an animal's movements. Owls and bats, for example, can lose the advantage of specialized night vision that enables them to hunt without being seen. Nighttime lighting favors other predators, as the nocturnal animals that are their prey lose the cover of darkness to hide. This issue is analyzed in Draft EIR Section 4.5, *Biological Resources*.

Significance Conclusion for Impact AES-4

Light Trespass

The Baylands Specific Plan would generate nighttime lighting over a broad area that is currently largely dark at night and would not exceed the performance standards set forth in Significance Threshold AES-4. Street lighting that would be installed along Bayshore Boulevard would meet standard City requirements. Nighttime lighting of the relocated fire station would occur within an industrial area that would not be occupied at night. Therefore, light trespass impacts would be less than significant.

Sky Glow

Because Specific Plan Section 3.8 prohibits some but not all sources from having light emitted above 90 degrees, nighttime lighting would be permitted to be projected above the horizontal plane from the bottom of the lamp, which would be inconsistent with Municipal Code Chapter 15.88 and contribute to sky glow. In addition, the Specific Plan does not provide any limitations on the amount of outdoor lighting and would therefore contribute to sky glow by permitting:

- More than 1.75 lumens per square foot of developed lot area within a residential parcel;
- More than 3.5 lumens per square foot of hardscape area within commercial, amenities, public facilities, and sustainable infrastructure parcels; and

- More than 0.35 lumens per square foot of trail or hardscape area within a park or open space area.

In addition, while the Specific Plan requires light fixtures that "produce a warm light," Baylands lighting could exceed the requirement of Municipal Section 15.88.060 D that the "correlated color temperature of all outdoor lighting shall be three thousand (3,000) Kelvin or less except for seasonal lighting."

Thus, sky glow impacts are significant.

Program EIR Mitigation Measures

MM AES-4a: Outdoor Lighting Standards (Program EIR Mitigation Measure 4.A-4a). All development within the Baylands site shall comply with the following lighting design standards in order to minimize Baylands development lighting.

- A master plan for street and parking lot lighting shall be approved by the City prior to final approval of design plans for roadways within the Brisbane portion of the Specific Plan area.
    - All streets within the Specific Plan area shall have uniform lighting standards with regard to style, colors, and materials in order to ensure consistency with design.
    - Parking lot lighting shall be of the same source of illumination as street lighting so as to ensure uniformity of night lighting color.
    - Due to their high energy efficiency, long life, and spectral characteristics, Narrow-Spectrum Amber LEDs shall be the preferred illumination source throughout the Brisbane portion of the Specific Plan area.
- A photometric analysis and lighting plan shall be prepared for each development project to demonstrate compliance with applicable nighttime lighting standards, requirements, and mitigation measures. The photometric analysis shall include an assessment of potential lighting impacts based on the height, location, light fixtures, direction, illumination intensity, and hours of operation. The lighting plan shall be submitted to the Community Development Department and City Engineer for final approval prior to approval of a building permit.

  When reviewing illumination plans, the City will review the following factors to determine the level of illumination required.
    - **Purpose:** The function and activities for the planned area;
    - **Safety:** The level of comfort and security needed to be provided;

- **Aesthetics:** The overall appearance of proposed lighting with respect to the Baylands and surrounding community; and
- **Impacts:** The extent to which proposed lighting minimizes impacts on adjacent land uses, maintains the area's dark night sky, and conserves energy.

Significance Conclusion with Implementation of Program EIR Mitigation Measures

The Specific Plan incorporates the light trespass provisions of Program EIR Mitigation Measure 4.A-4a but omits requirements for lighting master plans and photometric analyses of site-specific development projects. While the Specific Plan and the Program EIR mitigation measure would reduce light trespass to a less than significant level, the total amount of permitted nighttime lighting within the Baylands would be permit some sources of nighttime lighting not to be directed downward, which could adversely affect the area's dark night sky. Thus, sky glow impacts would remain significant.

Additional Mitigation Measures

MM AES-4b: Sky Glow Prevention. Baylands development shall comply with the provisions of Brisbane Municipal Code Chapter 15.88 and the following additional requirements.

1. No site-specific development project within the Specific Plan area may be permitted to provide nighttime lighting that exceeds:
   a. 1.75 lumens per square foot of developed lot area within a residential parcel;
   b. 3.5 lumens per square foot of hardscape area within a commercial, amenities, public facility, or sustainable infrastructure parcel; or
   c. 0.35 lumens per square foot of trail or hardscape area within a park or open space area.
2. Luminaires emitting more than 1,000 lumens shall be fully shielded and emit no more than 5 percent of their total lumen output above 80 degrees from the bottom of the lamp.
3. The maximum luminous or illuminated surface area of any individual sign shall not exceed 100 square feet.
4. External illumination of monument and other signage shall be mounted above the sign and directed downward.

Significance Conclusion with Implementation of All Mitigation Measures

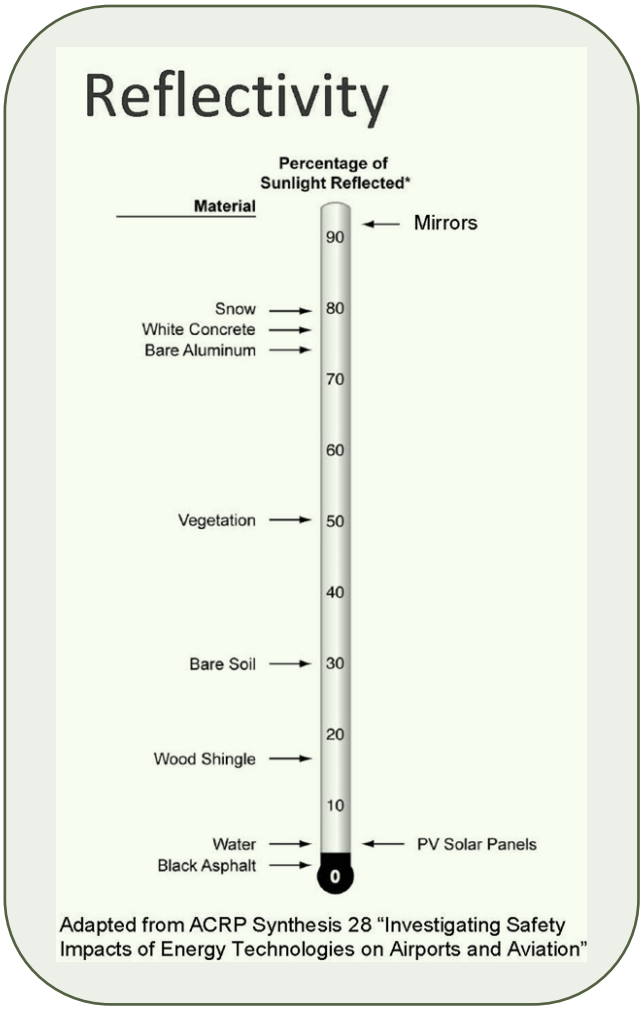
Mitigation Measure MM AES-4a requires that Baylands development comply with the dark night sky performance standards set forth in Threshold AES-4. Mitigation Measure MM AES-4b ensures compliance with Municipal Code Chapter 15.88, Dark Sky Ordinance, and additional requirements to reduce the adverse effects of nighttime lighting on the area's dark night sky. Together, these measures ensure compliance through a requirement for preparation and review of a photometric analysis and lighting plan for site-specific development projects prior to issuance of building permits.

Impacts would be reduced to less than significant with mitigation incorporated.

e. Impact AES-5: Daytime Glare

Methodology for Determining Significance

Daytime glare is caused by the reflection of sunlight or artificial light from highly polished surfaces, such as window glass or reflective materials, and, to a lesser degree, from broad expanses of light-colored surfaces. Daytime glare generation is common in urban areas and is typically associated with mid- to high-rise buildings with exterior façades largely or entirely made up of highly reflective glass or mirror-like materials from which the sun can reflect, particularly following sunrise and prior to sunset. Daytime glare can also be generated by metal and other reflective surfaces on above-ground infrastructure, signage, and public art installations. Concave surfaces have the potential to magnify sunlight, intensify glare, and create heat. Daytime glare generation is also related to sun angles, although glare resulting from reflected sunlight can occur regularly at certain times of the year. In some instances, reflected glare causes differential warming of adjacent uses.



The analysis of glare focuses on the extent to which the Baylands Specific Plan permits mid- to high-rise buildings, signage, or thematic elements with exterior façades

largely or entirely consisting of highly reflective glass or mirror-like materials from which the sun could reflect light onto glare-sensitive uses (e.g., dwelling units, school classrooms, parks, plazas, trails, playgrounds, and major roadways and the US 101 freeway). The analysis also addresses the extent to which above-ground infrastructure would be constructed with highly reflective polished metal surfaces.

The analysis of construction impacts focuses on temporary construction impacts occurring during site grading, infrastructure installation, and building construction. Thus, impacts associated with long-term sources of glare such as building façades, signage, or thematic elements that incorporate substantial amounts of reflective building materials are evaluated as part of long-term post-construction impacts, even though they would be first introduced to the Baylands during site construction.

To determine whether such impacts would occur, the analysis below evaluates the extent to which Specific Plan provisions would result in reflective surfaces on building façades and roofs, above-ground infrastructure, public art installations, and signage, and then determines whether reflected light from these surfaces (glare) would either (1) interfere with vision of sensitive users and thereby create a visual nuisance or hazard, or (2) result in differential warming of adjacent uses.

Impact Assessment

Construction Impacts

Daytime glare associated with construction activities would occur when reflective construction materials or equipment are positioned in highly visible locations where sunlight would be reflected. However, large, flat surfaces of reflective materials, like those needed to generate substantial glare, would not be associated with Baylands construction activities. Glare from construction activities would typically result from small reflective surfaces on construction equipment, such as window glass on earthmoving equipment, which move about the site through the workday. Moreover, glare produced by construction activities would be short term for individual construction activities. While various construction activities would be undertaken for the Specific Plan over a 20+ year period, the glare produced by these activities would be experienced as momentary flashes (“glint”) at different locations rather than recurring glint or a longer phenomenon at any given location.

Long-Term Post-Construction Impacts

Glare from Buildings

Baylands development would replace existing older industrial buildings that are small and have generally low reflectivity with substantially larger buildings that could have large surfaces of building materials with high solar reflectivity such as exterior glass and metal and light-

colored roofing materials. In addition, the relocated fire station would replace an existing two-story building and would not increase that building's solar reflectivity.

Highly reflective and specular (mirrorlike) building envelopes have become widely adopted not only for aesthetic reasons, but also to increase building energy efficiency and improve occupant comfort. Such buildings are sometimes designed with unique geometries that reflect a high percentage of sunlight toward the outdoor environment resulting in substantial glare from highly specular materials such as the glass or polished stainless steel on exterior building façades (Suk 2016).

While the Specific Plan prohibits the use of reflective glass in all residential building types, it does not prohibit use of reflective glass on commercial, amenity, or hospitality building types; however, it does require that reflective materials on Campus Mid-Rise and Campus Low-Rise buildings "be positioned to not reflect daytime glare onto the freeway." In addition, Specific Plan standards for all building types include the following design guideline to reduce rooftop heat gain (emphasis added):

> "Where solar panels or shade structures are not installed, cool roof design shall be employed for all non-occupiable flat roof surfaces through one or more of the following:
>
> - **Highly reflective roofing material or coating (minimum 70 percent solar reflectance)**
> - Green roof
> - Other systems or material with high thermal emittance (0.9 or higher) which provide reduction in solar heat gain"

Reflective concave surfaces have the potential to magnify sunlight, intensify glare at the focal point, and cause substantial heat gain in addition to nuisance glare (Whitely 2010). Because the Specific Plan does not provide guidelines that address glare from curved (particularly concave) building surfaces, the ultimate shape of Baylands buildings could exacerbate the amount of glare and cause heat gain.

Glare from Above-Ground Infrastructure

Portions of major above-ground infrastructure associated with the water recycling facility, water storage tanks, battery storage facilities, switching substation, and improvements at the existing Martin Substation (to connect to the Specific Plan's switching substation and utility-scale battery storage facility) could include outdoor/exterior stainless steel or other reflective metal piping or cladding. Polished stainless steel and other metal surfaces can be highly reflective and generate substantial glare depending on the amount that is used, the extent to which stainless steel and other metal surfaces are shaded, and the specific locations they are used. Improvements at the Martin Substation would be minor in relation to existing facilities and would not substantially increase solar reflectivity.

Glare from Solar Panels

A minimum of 85,000 megawatt hours (MWh) of electricity annually will be generated by on-site solar panels installed on building rooftops, in parking areas, and in a 55- acre solar farm to be constructed within the southeast area of the site. Photovoltaic solar panels are typically designed to absorb visible light and would not be a substantial source of glare.[128]

Glare from Project Signage and Public Art

While street and directional signage does not typically generate daytime glare, the use of metal lettering on site and building identification signs, as well as use of metal or other reflective surfaces in outdoor public art installations, could generate glare depending on the amount that is used, the extent to which reflective surfaces are shaded, and the specific locations they are installed.

Significance Conclusion for Impact AES-5

Baylands development would create new sources of substantial daytime glare, particularly in the early morning and late afternoon hours by requiring reflective building materials on building roofs as well as permitting reflective materials on building façades, thematic elements, site and building identification signage, and public art installations. Glare generated by such reflective surfaces could be exacerbated if curved surfaces are provided.

Above-ground infrastructure could also include highly reflective stainless-steel and other metal piping and cladding on structures. Glare resulting from Baylands development could produce nuisance effects within residential areas; classrooms; and parks, trails, and playgrounds, as well as adversely affect motorists along US Highway 101, Geneva Avenue, and Bayshore Boulevard by impairing vision.

This impact would therefore be significant and require mitigation.

Program EIR Mitigation Measures

MM AES-5a: Prevent Daytime Glare (Program EIR Mitigation Measure 4.A-4b). All building exteriors within the Baylands Specific Plan area shall be composed of textured and other non-reflective materials, including high-performance tinted non-

[128] Solar panels are composed of numerous cells, which differ from a typical reflective surface in that they have a microscopically irregular surface designed to trap the rays of sunlight for the purposes of energy production. Moreover, the intent of solar technology is to increase efficiency by *absorbing* as much light as possible, which *reduces* reflectivity and glare (relative to regular dark or mirrored glass typically observed in common large-scaled residential and commercial development). Solar glass sheets (the glass layer that covers photovoltaic panels) are typically tempered glass that is treated with an anti-reflective or diffusion coating that further diffuses the intensity of glare produced. Solar panels without an anti-reflective coating have a solar reflectivity of approximately five percent; with an anti-reflective coating, the solar reflectivity is reduced to approximately three percent.

mirrored glass. Any reflective materials on building exteriors that have a light reflectivity factor greater than 30 percent shall be positioned so as to not reflect daytime glare onto the US 101 freeway or onto existing residential communities in Brisbane and Visitacion Valley. Mirrored glass shall be prohibited.

Significance Conclusion with Implementation of Program EIR Mitigation Measures

Although Mitigation Measure MM AES-5a (Program EIR Mitigation Measure 4.A-4b) would prohibit mirrored glass and ensure daytime glare from buildings would not be reflected onto the US 101 freeway or existing residential communities in Brisbane and Visitacion Valley, daytime glare could result from metal surfaces on above-ground infrastructure, signage, outdoor public art installations, concave surfaces that concentrate reflective light, and reflective façade materials sloping back from the ground surface at less than a 90^{o} angle that reflect high-angle sunlight along the ground surface. As a result, a significant impact would occur even with implementation of MM AES-5a (Program EIR Mitigation Measure 4.A-4b), requiring additional mitigation.

Additional Mitigation Measures

MM AES-5b: Additional Daytime Glare Protection. In addition to the requirements of Mitigation Measure MM AES-5a, Specific Plan area development shall comply with the following design standards to minimize hazard and nuisance glare:

- Reflective materials on building exteriors, including roofs, that have a light reflectivity factor greater than 30 percent shall be limited to less than 25 percent of any given wall surface, and shall not be placed on roofs.
- Concave surfaces that can serve to concentrate reflective light shall be avoided.
- Reflective façade materials that slope back from the ground surface at less than a 90^{o} angle and can reflect high-angle sunlight along the ground surface shall be avoided.
- Stainless steel and other metal surfaces on buildings, above-ground infrastructure, signage, and outdoor public art installations shall use bare or non-polished metal or be shaded or screened to avoid the generation of glare.

Significance Conclusion with Implementation of All Mitigation Measures

Implementation of Mitigation Measures MM AES-5a and MM AES-5b would minimize the reflectivity and area of reflective materials on building façades and other surfaces. Mitigation Measures MM AES-5a and MM AES-5b would also prevent building designs and materials that

generate excess glare and heat generation at ground level, as well as minimize glare from above-ground infrastructure, signage, and outdoor public art installations. This impact would therefore be less than significant with mitigation incorporated.

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4.6 BIOLOGICAL RESOURCES

4.6.1 INTRODUCTION

This section of the environmental impact report (EIR) identifies existing biological resources in the Specific Plan area and vicinity and the physical changes that would result from the 2025 Specific Plan project, along with mitigation measures to avoid or reduce significant impacts. The description of biological resources includes plants; wildlife; protected species and their habitats; and jurisdictional resources subject to federal, state, and local laws, policies, or conservation plans that apply to some or a part of the proposed development footprint.

The likelihood of a species occurring was determined based on whether (1) the species was directly observed, (2) suitable habitat was found, or (3) there are documented occurrences within the vicinity of the Specific Plan area.

a. Definitions

Bed and bank refer to parts of a stream or drainage feature. A stream bed is the channel bottom that represents the physical confine of normal water flow. The lateral confines or channel margins are known as the stream bank or riverbank.

Canopy, in the context of this section of the EIR, refers to the layer of leaves, branches, and stems of trees that covers the ground when viewed from above.

Degradation is a decline in habitat quality due to physical changes to the environment that leads to reduced survival and/or reproductive success in a population. The decline is typically related to changes in food availability and/or presence and quality of vegetation needed for roosting or nesting or during migration.

Emergent wetland refers to a wetland type characterized by erect, rooted, herbaceous, hydrophytic (water-dependent) plants, excluding mosses and lichens. Such wetlands are usually dominated by perennial plants with vegetation present for most of the growing season in most years.

Ephemeral wetlands are depressional wetlands that temporarily hold water, usually in the spring and early summer or after heavy rains.

Habitat refers to the physical environment in which a plant or animal species could occur for all or a portion of its life stages.

Habitat restoration refers to the practice of renewing and restoring degraded, damaged, or destroyed ecosystems and habitats in the environment by active human intervention and action.

In-kind replacement occurs when the conservation value of replacement habitat must be consistent with the conservation values of the habitat being lost or requiring replacement to meet the "no net loss of sensitive habitats" performance standard established in this EIR.

Jurisdictional area refers to areas subject to the regulatory authority of the U.S. Army Corps of Engineers (USACE), the Regional Water Quality Control Board (RWQCB), and the California Department of Fish and Wildlife (CDFW) pertaining to drainage features and adjacent habitat areas within the Specific Plan area.

Monitoring refers to regular observation of a habitat over time, resulting in a collection of data that is used to verify compliance with conservation agreement goals and objectives and can also be used to identify when adaptive management may be required as a corrective measure to improve the quality or quantity of conservation habitats.

Nesting habitat includes trees and shrubs that are used by bird species during the breeding season.

Perennial describes a plant or animal that can be observed during all times of the year, and also to a water course that carries water year-round.

A **riparian zone** or **riparian area** is the interface between land and a river or stream. Plant habitats and communities along the river margins and banks that depend on water in the river or stream, or groundwater associated with the river or stream are called riparian vegetation.

Roosting habitat encompasses areas where individual birds or bats use trees for resting and cover during the non-breeding season.

Seasonal wetlands are a type of wetland characterized by standing water or saturated soil during the October through March growing season.

Special-status habitat refers to plant communities or physical features that have the potential to support plant or wildlife species listed or proposed for listing under either the California Endangered Species Act (CESA) or the federal Endangered Species Act (FESA).

Special-status species are plant and animal species that are listed, proposed for listing, or candidates for future listing as threatened or endangered under the FESA; species identified as California Species of Special Concern or listed or proposed for listing as threatened or endangered under the CESA; plants designated with a California Rare Plant Ranking (CRPR) by the California Native Plant Society (CNPS); species that are on the United States Watchlist of Birds of Conservation Concern; or species that are fully protected in California under the California Fish and Game Code.

Substrate refers to the surface or material on or from which an organism lives, grows, or obtains its nourishment.

Upland refers to land that is at a higher elevation than the adjacent alluvial plain, stream, or water course and are not sufficiently wet to support the development of vegetation, soils, and/or hydrologic qualities associated with wetlands.

Waters of the United States are defined in the Code of Federal Regulations (CFR) (33 CFR 328.3(a); 40 CFR 230.3(s)) as:

1. Waters which are:
    a. Currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
    b. The territorial seas; or
    c. Interstate waters;
2. Impoundments of waters otherwise defined as waters of the United States under this definition, other than impoundments of waters identified under paragraph (a)(5) of this section;
3. Tributaries of waters identified in paragraph (a)(1) or (2) of this section that are relatively permanent, standing or continuously flowing bodies of water;
4. Wetlands adjacent to the following waters:
    a. Waters identified in paragraph (a)(1) of this section; or
    b. Relatively permanent, standing or continuously flowing bodies of water identified in paragraph (a)(2) or (a)(3) of this section and with a continuous surface connection to those waters;
5. Intrastate lakes and ponds, streams, or wetlands not identified in paragraphs (a)(1) through (4) of this section that are relatively permanent, standing or continuously flowing bodies of water with a continuous surface connection to the waters identified in paragraph (a)(1) or (a)(3) of this section.

Waters of the United States do not include prior converted cropland (40 C.F.R., § 120.2[b][2]). Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with the United States Environmental Protection Agency (USEPA).

4.6.2 PHYSICAL ENVIRONMENTAL SETTING

a. Baseline

Existing conditions observed during the recirculated Notice of Preparation review period (Spring 2023) and previous habitat surveys of the Baylands Specific Plan area conducted during the spring seasons of 2019, 2020, 2021, and 2022, which is the appropriate time of year for surveying sensitive habitat areas within Visitacion Creek and along the north shore of the Brisbane Lagoon, as well as other riparian areas within the Baylands, were collectively used to provide the baseline for the biological resources analysis.

To determine current baseline conditions within the Specific Plan area, and in advance of additional site reconnaissance surveys, database searches of the California Natural Diversity Database (CNDDB), CNPS Electronic Inventory, and the U.S. Fish and Wildlife Service (USFWS) species list were conducted to inform the likelihood of special-status species presence.

In September 2022 and February 2023, additional site reconnaissance surveys were conducted to assess the potential for the Specific Plan area to support special-status species; sensitive natural communities, such as waters of the United States, including wetlands and non-wetland waters; wildlife movement corridors; protected trees; and habitat conservation plans. A complete assessment of Callippe silverspot, Mission blue, Bay checkerspot, and San Bruno elfin butterfly habitat at Icehouse Hill was conducted, including four surveys in April and June of 2023 to identify habitat types, butterfly host plants, butterfly nectar plants, and invasive species.

b. Existing On-Site Biological Resources

To create what is now the Baylands Specific Plan area, a portion of San Francisco Bay was filled east of the historic shoreline (see **Figures 2-3** and **2-4**). Thus, most of the on-site upland habitats occur on fill that overlies Bay Mud. Icehouse Hill is the only remaining native substrate in the Baylands. Grading on the east side of Icehouse Hill occurred during railroad construction in the early 1900s, and the western slope was later cut to build Bayshore Boulevard. Substrate in the Icehouse Hill portion of the Baylands is consistent with nearby San Bruno Mountain and supports habitats similar to those found in the San Bruno Mountain Habitat Conservation Plan (HCP) area.

Drainages within the Baylands include Guadalupe Valley Creek and the engineered Visitacion Creek, while open water occurs within the Brisbane Lagoon, as well as in several small locations along Visitacion Creek. These drainages and open water habitat, including wetlands and marsh habitats, are remnants of extensive wetland and tidal lands that once fringed San Francisco Bay in the Brisbane area (Metis 2022).

Because of historical, intensive land uses, including a former railyard and landfill and the related absence of native substrate from such areas, rare plants are not expected across most of the Baylands. However, annual grasslands and coastal scrub habitats on Icehouse Hill provide potential habitat for non-listed special-status plants, including bent-flowered fiddleneck, San Francisco collinsia, Choris's popcorn flower, and San Francisco campion.

In September 2022 and February 2023, ESA conducted site reconnaissance surveys to assess the potential for the Specific Plan area to support and/or adversely affect special-status species; sensitive natural communities, such as waters of the United States, including wetlands and non-wetland waters; wildlife movement corridors; protected trees; and habitat conservation plans. ESA also retained the services of Coast Ridge Ecology, LLC (Coast Ridge), to complete an assessment of Callippe silverspot, Mission blue, Bay checkerspot, and San Bruno elfin butterfly habitat at Icehouse Hill. This effort included four surveys conducted in April and June of 2023 to identify habitat types, butterfly host plants, butterfly nectar plants, and invasive species. Coast Ridge's report, titled *Butterfly Habitat Mapping and Restoration Opportunities at Icehouse Hill, Brisbane Baylands, Brisbane, CA*, is provided as an appendix to the Biological Resources Technical Report (EIR Appendix D).

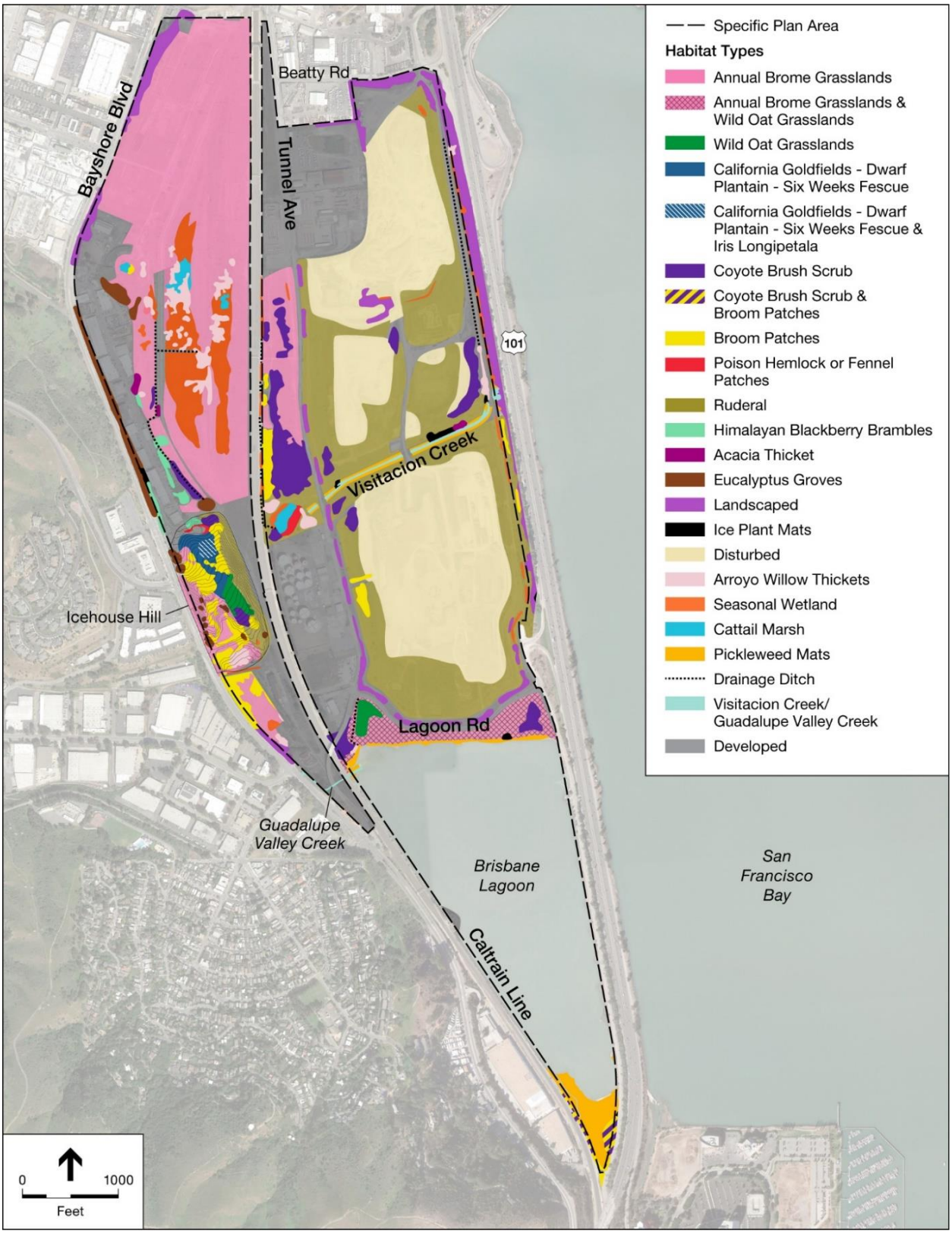
Terrestrial Vegetation Communities

The distribution of terrestrial vegetation communities in the Specific Plan area is shown on **Figure 4.6-1** and communities are summarized below.

*California Goldfields-Dwarf Plantain Flower Fields (*Lasthenia californica – Plantago erecta – Vulpia microstachys – *Herbaceous Alliance)*

With a well-mixed assemblage of grasses and forbs, the California Goldfields – Dwarf Plantain Flower Fields (CGDP) habitat on Icehouse Hill supports a high density of native species. The native plants on Icehouse Hill include purple needlegrass (*Nassella pulchra*), California melic grass (*Melica californica*), tomcat clover (*Trifolium willdenvii*), variegated clover (*Trifolium varigatum*), buttercup (*Ranunculus californicus*), suncup (*Taraxia ovata*), California goldfields (*Lasthenia californica*), miniature and sky lupine (*Lupinus bicolor* and *L. nanus*), coast iris (*Iris longipetala*), yarrow (*Achillea millefolium*), yellow mats (*Sanicula arctopoides*), California checkerbloom (*Sidalcea malviflora*), toad rush (*Juncus bufonius*), blue wild rye (*Elymus glaucus*), western blue-eyed grass (*Sisyrinchium bellum*), soap plant (*Chlorogalum pomeridianum*), Coast Range mule's ears (*Wyethia glabra*), California poppy (*Eschscholzia californica*), buckwheat (*Eriogonum nudum*), goldenback fern (*Pentagramma triangularis*), and California plantain (*Plantago erecta*). Johnny jump-up (*Viola pedunculata*) occurs in abundance in the early spring across the top and northern slope of Icehouse Hill. As the growing season progresses, annual grasses become more dominant, with rattlesnake grass (*Briza maxima*), little quaking grass (*Briza minor*), wild oat (*Avena* spp.), and brome (*Bromus* spp.) all blooming across this habitat. This habitat type is considered sensitive by the CDFW California Natural Communities List (CDFW 2022).

Figure 4.6-1: Baylands Terrestrial Habitats



SOURCE: Metis, 2022

*Annual Brome Grasslands (*Bromus *[*diandrus, hordeaceous*]* – Brachypodium distachyon *– Semi-Natural Herbaceous Stands)*

Grasslands dominated by brome species such as rip-gut brome (*Bromus diandrus*), soft chess (*Bromus hordeaceus*), and false brome (*Brachypodium distachyon*) occur across the northern portions of the former railyard, on the western side of Icehouse Hill, and at various other locations across the Specific Plan area. Other species commonly found within the annual brome grasslands include hop clover (*Trifolium campestre*), Bermuda buttercup (*Oxalis pes-caprae*), Italian thistle (*Carduus pycnocephalus*), black mustard (*Brassica nigra*), wild radish (*Raphanus sativus*), Mediterranean barley (*Hordeum marinum* ssp. *gussoneanum*), yellow starthistle (*Centaurea solstitialis*), wild fennel (*Foeniculum vulgare*), pampas grass (*Cordateria jubata*), bristly ox-tongue (*Helminthotheca echioides*), English plantain (*Plantago lanceolata*), and Italian ryegrass (*Festuca perennis*). Within the western portion of the Baylands, piles of pampas grass were observed throughout the northern portion of the former railyard as a result of an apparent effort to clear this invasive species from the area. Between spring and fall, the annual grasses fall over and sweetclover (*Melilotus alba*), wild fennel, horsetail weed (*Conyza canadensis*), and stinkwort (*Dittrichia graveolens*) bloom and reach their largest size. On the west side, north of the former railyard buildings, populations of common tarweed (*Centromadia pungens*) were also found blooming. On Icehouse Hill, it was observed that Bermuda buttercup is an early-season co-dominant with false brome associated with the soil cut where the western slope was graded to construct Bayshore Boulevard. This area was distinctive with the proliferation of Bermuda buttercup prior to annual grass species bloom (Metis 2022).

*Wild Oat Grasslands (*Avena *[*barbata, fatua*]* *– Semi-Natural Herbaceous Stands)*

Wild oat grasslands occur along the south side of Lagoon Way and on the south slope of Icehouse Hill. These habitats are dominated by wild oat (*Avena fatua*, *A. barbata*) in the early spring and transition to grasslands dominated by rattlesnake grass (*Briza maxima*) and little quaking grass (*Briza minor*) as the blooming season moves into summer. *Avena* spp. and *Briza* spp. consist of greater than 50 percent cover within the grasslands. Associated grass species with less than 50 percent coverage include Italian ryegrass and velvet grass (*Holcus lanatus*). Ruderal herbaceous species (i.e., plants that rapidly colonize disturbed areas) found throughout include many of the same associates as found within brome grassland (discussed above), including Italian thistle, black mustard, wild radish, bristly ox-tongue, and English plantain. Ruderal plants that bloom in the late season between July and October become more prominent as the annual grasses finish their life cycle and species such as wild fennel, horsetail weed, and yellow starthistle appear dominant over flattened grasses (Metis 2022). The area south of Lagoon Way supports a mixture of wild oats and brome.

*Perennial Rye Grass Field (*Festuca perennis – *Natural Herbaceous Stands)*

Large patches of Italian rye grass dominate some slopes, presumably due to re-seeding during erosion management. This vegetation pattern changes depending on where soils have been deposited or grading has occurred and been followed by hydroseeding. Due to the highly variable location of these areas, they are not mapped in **Figure 4.6-1**.

*Coyote Brush Scrub (*Baccharis pilularis – *Shrub Alliance)*

Stands of coyote brush (80 to 100 percent cover) form habitat nearing a monoculture through the flat lands of the abandoned railyard between the interior roads on either side of the Caltrain tracks and extending east to Tunnel Avenue. The coyote brush vegetation varies between 5 and 10 feet tall, forming thick bands of shrubland habitat. Associates within the scrub consist of low-growing herbaceous species including rip-gut brome, Italian rye, mustards, and other invasive weedy forbs generally occupying less than 10 percent of the ground cover. At the northeastern corner of Icehouse Hill, this habitat is formed by varying percentages of coyote brush (dominant), and lower percentages of toyon (*Heteromeles arbutifolia*), poison oak (*Toxicodendron diversilobum*), yerba santa (*Eriodictyon californicum*), sticky monkey flower (*Diplacus aurantiacus*), buckeye (*Aesculus californica*), and elderberry (*Sambucus nigra* ssp. *caerulea*). California polypody (*Polypodium californicum*) grows profusely along the northeast-facing slope of Icehouse Hill during the late winter and spring. In addition, beyond the fern-dominated substrates, the understory at this location supports forb species such as goldenback fern, soap plant, elegant brodiaea (*Brodiaea elegans*), two-tone everlasting (*Pseudognaphalium biolettii*), yarrow, and Ithuriel's spear (*Triteleia laxa*). Native perennial bunchgrasses including purple needlegrass, California melic grass and blue wild rye (*Elymus glaucus*) occur in association with non-native annuals such as little quaking grass and velvet grass among the understory vegetation.

A coyote brush-toyon-yerba santa (*Baccharis pilularis – Heteromeles arbutifolia – Eriodictyon californicum*) association (mapped as coyote brush scrub) occurs on the southern-facing slope of Icehouse Hill, with approximately 40 percent cover. The herbaceous vegetation between the shrubs is dominated by wild oats, little quaking grass, and rattlesnake grass (Metis 2022).

*Poison Hemlock or Fennel Patches (*Conium maculatum – Foeniculum vulgare – *Herbaceous Semi-Natural Alliance)*

Poison hemlock and fennel are common and widely distributed across the Specific Plan area and can be found in strips in some locations and more generally dispersed throughout the various grasslands. In limited areas, the amount of fennel or poison hemlock was greater than 50 percent and was mapped as conforming to this habitat alliance designation. Other areas where the fennel or hemlock was less than 50 percent, as most often observed, was identified as ruderal, described below (Metis 2022).

Ruderal Communities

Ruderal communities are defined by a dominance of non-native herbs and forbs, which can give this habitat a shrubby appearance, with vegetation sometimes up to 4 feet or more in height. In contrast, annual brome grassland and wild oat grasslands, for example, are generally shorter. Some of the grass species found in brome or wild oat grassland habitats may also be found as lesser components of the ruderal habitat type. Vegetation overlap between plant species among the non-native habitat types is common in California. The vegetative composition of ruderal communities demonstrates a prevalence of dicots over grass species.

The vast majority of the ruderal habitat communities within the Specific Plan area consists of lands that are vegetated with a mosaic of invasive forbs where one species does not have a greater than 50 percent dominance. Non-native broadleaves commonly observed include fennel, poison hemlock, various mustard species (*Brassica* spp., *Raphanus* spp.), Italian thistle, yellow starthistle, bristly ox-tongue, red valerian, crown daisy (*Glebionis coronaria*), and pride of madeira (*Echium candicans*). Shrubs such as French broom (*Genista monspessulana*), cotoneaster (*Cotoneaster* sp.), and pyracantha (*Pyracantha crenato-serrata*) are common constituents as well; along with pampas grass. The native pioneer shrub species coyote brush and toyon can also be found interspersed among the non-native forbs but generally consist of less than 10 percent cover. A few sapling gum trees (*Eucalyptus* sp.) are also found growing in some ruderal areas (Metis 2022).

The Specific Plan area supports large areas of ruderal vegetation to the north and south of Visitacion Creek in the former soils processing areas. On the eastern side of Icehouse Hill, the steep, rocky slope supports sparse wild oat and fennel vegetation at the upper half of the slope, while the southern slope near the toe of the escarpment is found with thick valerian (*Centranthus ruber*) and only a scattering of grasses and forbs. In the steepest locations, the slopes may be only thinly vegetated with annual grasses and can contain large swaths of bare ground. This area is best categorized as ruderal habitat due to the dominance of valerian and fennel where vegetation is present (Metis 2022).

*Broom Patches (*Cytisus scoparius *and Others – Semi-Natural Shrubland Stands)*

French broom forms a distinct monoculture on several slopes of Icehouse Hill, where it grows to a height of 6 to 10 feet, forming a wall of vegetation. The herbaceous vegetation beneath the broom is limited due to lack of sunlight and the toxic nature of French broom foliage and seeds. Infestations of broom degrade the quality of habitat for wildlife by displacing native vegetation that are preferred forage species and by changing the microclimate conditions at the soil level (California Invasive Plant Council 2022). The acreage of broom has grown within the Specific Plan area as the shrubs have spread across a greater surface area compared to 2013 (Metis 2022).

*Pampas Grass Patches (*Cortaderia *[*jubata, selloana*] – Semi-Natural Herbaceous Stands)*

Pampas grass patches were common across the northern portion of the Baylands in 2019. In 2022, pampas grass was sprouting from the piles that were created during earlier bulldozer clearing activity (Metis 2022).

Acacia Thicket

Wattle (*Acacia* spp.) along with scattered escaped ornamental fruit trees (*Prunus* spp.) are also a component of the former invasive scrub habitat. Species of acacia in the thicket included *Acacia dealbata*, *A. longifolia*, *A. melanoxylon*, and *A. pycnantha*. The clusters of wattle have been called acacia thickets on the habitat map, **Figure 4.6-1**. Ornamental fruit trees are found sporadically within the acacia thickets, especially near Bayshore Boulevard. Broom, pampas grass, and acacia are found growing on uplands surrounding the Brisbane Lagoon, adjacent to the eastern side of Bayshore Boulevard, in various locations on Icehouse Hill, and within the interior of the Specific Plan area (Metis 2022).

*Himalayan Blackberry Brambles (*Rubus armeniacus *– Semi-Natural Shrubland Stands)*

Himalayan blackberry (*Rubus armeniacus*) exists to the north of Icehouse Hill, east of the industrial complex along Bayshore Boulevard. Thick swaths of Himalayan blackberry occur, forming impenetrable brambles and spreading to the north from this region. Himalayan blackberry is an invasive weed identified by the California Invasive Plant Council; it has aggressive growth patterns that limit other native vegetative growth and overtakes pastures and riparian corridors (Metis 2022).

*Eucalyptus Groves (*Eucalyptus [globulus, camaldulensis] *– Semi-Natural Woodland Stands)*

Several groves of blue gum trees (*Eucalyptus globulus* and *Eucalyptus* spp.) were observed to form a contiguous habitat type along Bayshore Boulevard. Gum trees occur along the Bayshore Boulevard right-of-way, forming eucalyptus groves. Several locations to the east also support eucalyptus trees. Eucalyptus species are identified by the California Invasive Plant Council as reducing the biodiversity beneath their canopy. Below the canopy of eucalyptus trees, the shedding tree bark deposits heavy debris and the leaves release allelopathic chemicals, creating inhospitable soils that do not allow for the growth of many annual or perennial native or weed species (Metis 2022).

Landscaped Habitat

Landscaped habitat includes minor landscaped areas associated with some buildings and the plantings of trees as street borders with lollipop tree (*Myoporum laetum*), pine (*Pinus* ssp.), red and white bottlebrush (*Callistemon viridiflorus* and *Callistemon salignus*), wattle (*Acacia* spp.), and other non-native ornamental species. Landscaped habitat occurs between the former soils

processing operations area and the adjacent roadways that surround the Specific Plan area, including the north side of Lagoon Way, the east side of Tunnel Avenue, the north side of Beatty Avenue, and west side of US Highway 101 between the highway and the former soils processing area. A dense row of landscape vegetation lines the Bay along US Highway 101, with many ornamental trees and shrubs that self-propagate along the highway shoulder. The understory vegetation and gaps between the trees in the landscaped areas support English ivy (*Hedera helix*) and white ramping fumitory (*Fumaria capreolata*) (Metis 2022).

*Ice Plant Mat (*Carpobrotus edulis *or Other Ice Plants – Semi-Natural Herbaceous Stands)*

Ice plant (*Carpobrotus* spp.) is known to spread horizontally across the ground or soil surface and smother other vegetative species that could potentially occur. It changes the soil chemistry, making it inhospitable to many other native herbs after it is established, and causes residual effects to vegetation growth once it is removed. Several locations within the Specific Plan area have been observed with ice plant mats. Ice plant is identified by the California Invasive Plant Council as responsible for decreasing vegetative diversity. The mats in the Specific Plan area occur adjacent to native pickleweed mats and likely reduce surface areas over which the pickleweed could potentially grow (Metis 2022).

Disturbed Areas

The areas within the soils processing site on the east side of the Specific Plan area have been continually disturbed through earth moving, earth and debris dumping, and tractor operation for many years. These areas do not support vegetation. They contain bare earth and debris such as concrete, asphalt, and/or variously sized rocks. There are no habitat values relating to vegetation associated with these disturbed areas (Metis 2022).

Waters of the United States and Wetlands

Waters of the United States are defined in CFR § 120.2, which states that "the term waters of the United States means: (1) All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide; (2) All interstate waters including interstate wetlands; (3) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters." For purposes of this analysis, "waters of the United States" includes both jurisdictional wetlands and non-wetland waters (e.g., estuarine intertidal rocky shore, open water, and constructed waters). In this analysis, the terms *wetland* and *non-wetland waters* are used to describe jurisdictional aquatic areas subject to the regulatory authority of the USACE, the RWQCB, and the CDFW.

Two types of jurisdictional wetlands are present on-site: seasonally saturated (rain-dependent freshwater) wetlands, which accumulate precipitation in shallow depressions; and estuarine intertidal (tidal marsh) wetlands, formed as a result of tidal action through culverts into the man-made channel of Visitacion Creek and along the shore of the Brisbane Lagoon where fringe marsh has developed (Biohabitats 2023b). The extent of wetlands and non-wetland waters within the Specific Plan area, as described in *The Baylands Wetland Delineation Report*, which was verified by the USACE in the July 2021 Preliminary Jurisdictional Determination (PJD) (Biohabitats 2023b, Appendix 4), is shown in **Figure 4.6-2a** through **Figure 4.6-2c**. Existing wetlands and non-wetland waters are identified in **Table 4.6-1**.

Table 4.6-1: Wetlands and Non-Wetland Waters within the Baylands Specific Plan Area

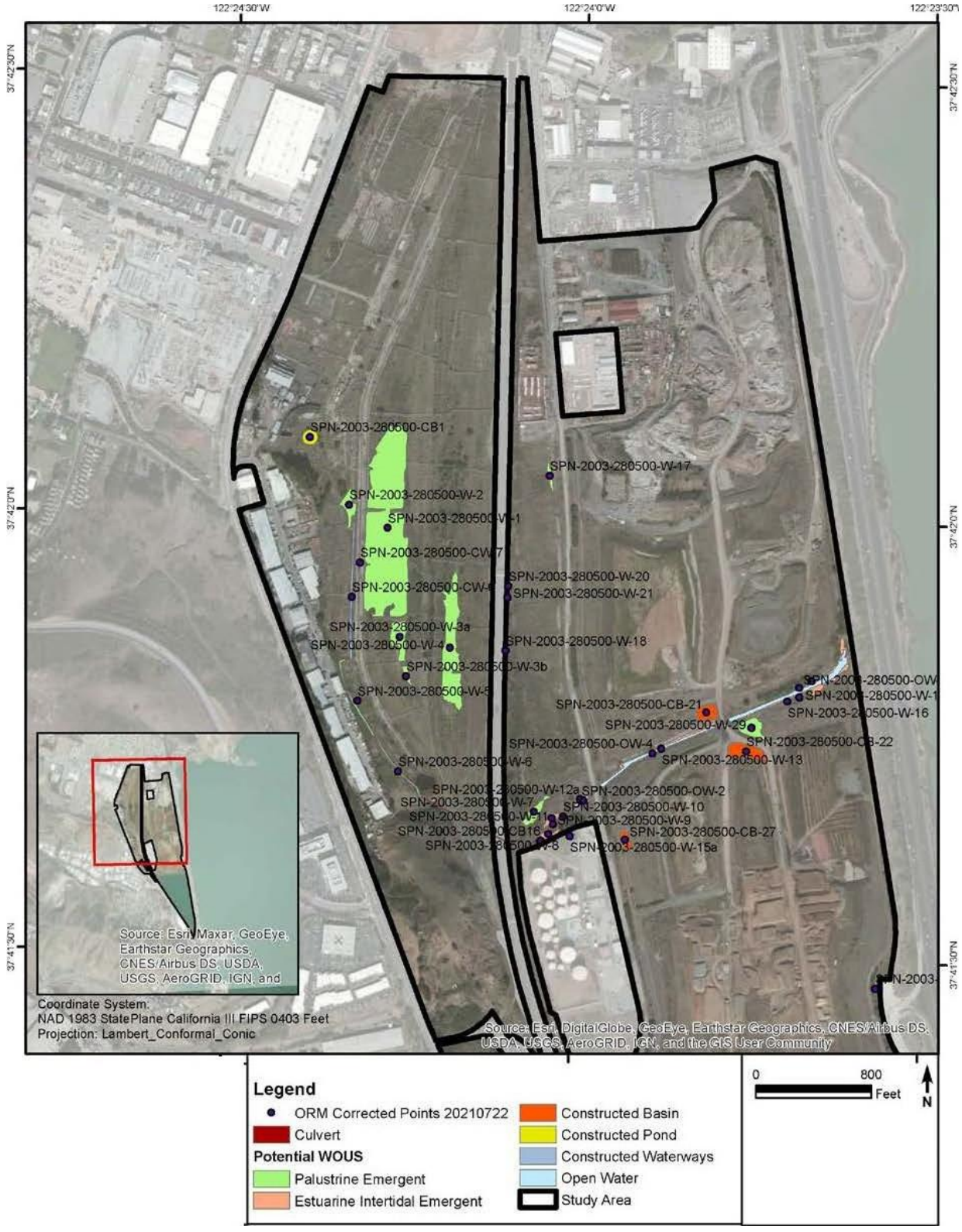
	Type	Hydrology	Existing Amount
Wetlands			
Wetland	Palustrine Emergent	Freshwater	11.72 acres
Wetland	Estuarine Emergent	Intertidal Marsh	6.43 acres
Wetland	Constructed Basin	Seasonal	1.73 acres
SUBTOTAL WETLANDS			*19.88 acres*
Non-Wetland Waters			
Non-wetland waters	Open Water	Open Water	116.07 acres
Non-wetland waters	Estuarine Rocky Shore	Intertidal	1.32 acres
Non-wetland waters	Constructed Waterway	Seasonal	0.26 acres
	SUBTOTAL NON-WETLAND WATERS		*117.65 acres*
	TOTAL WETLANDS AND NON-WETLAND WATERS		**137.53 acres**

SOURCE: Environmental Science Associates (ESA), September 2023, based on Biohabitats Wetland Delineation, representing the acreages accepted by the verified Preliminary Jurisdictional Delineation, July 2021.

NOTE: Following the Supreme Court's 2023 *Sackett v. EPA* ruling, some federal wetlands identified in the verified delineation and shown in Table 4.6-1 may not qualify as "adjacent" features per revised USACE regulations and guidance; hence, the acreage of waters of the U.S. within the Specific Plan area is likely lower than shown here. All of the identified waters and wetlands continue to qualify as waters of the state.

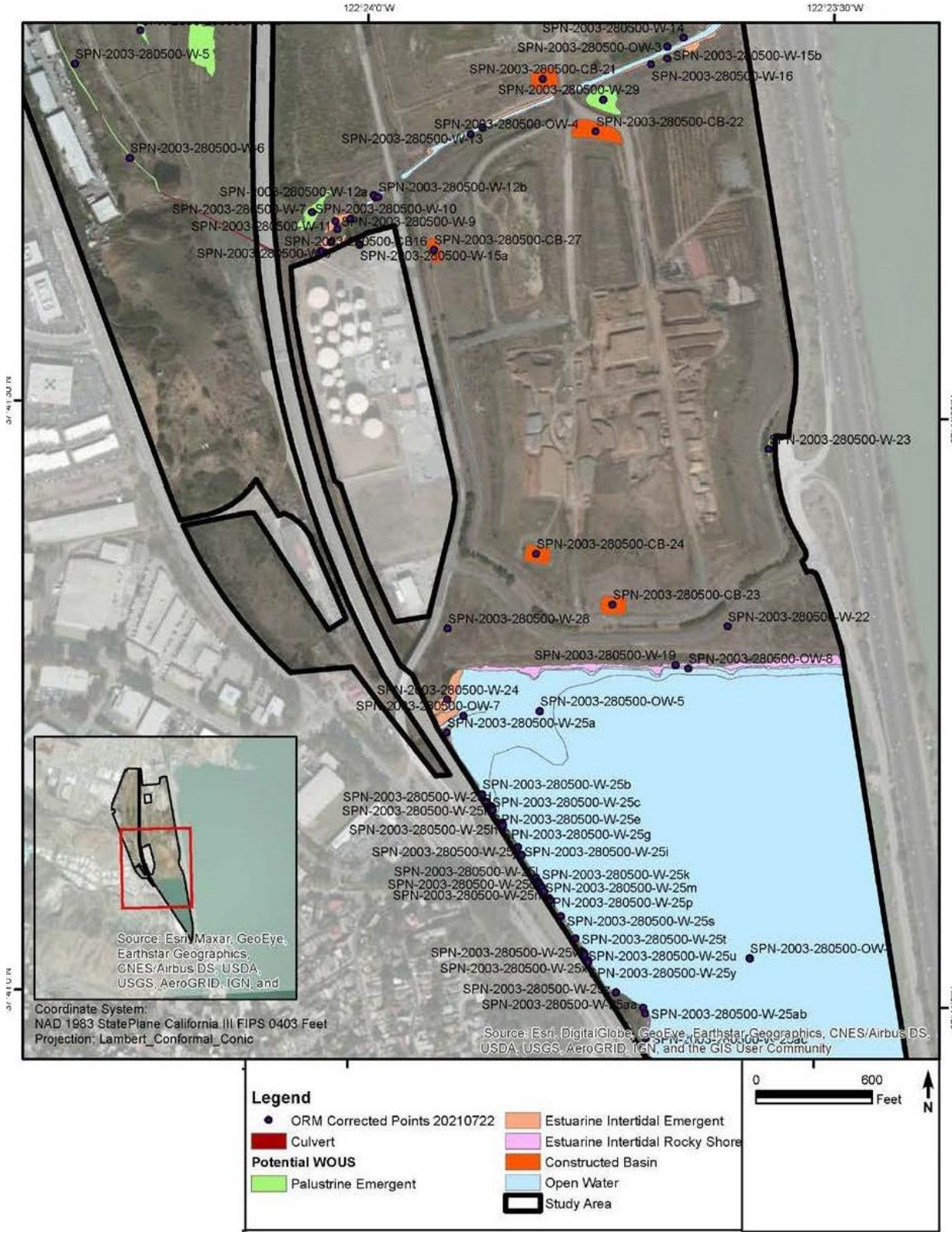
There are two primary surface water features located within the Specific Plan area: Visitacion Creek and the Brisbane Lagoon. Visitacion Creek is an engineered channel located in the central portion of the Baylands. Water runoff from the Bayshore Heights area west of the Baylands flows through an old brick culvert into a timber box that emerges from under the Caltrain rail embankment and flows into the open channel. Visitacion Creek (about 2,340 feet of open water) is separated into three sections by four culverts before ultimately discharging into San Francisco Bay. The tide is the dominant hydrologic influence on the marsh fringe of Visitacion Creek.

Figure 4.6-2a: Delineated Potential Baylands Wetlands and Non-Wetlands Waters of the United States within the Northern Portion of the Specific Plan Area



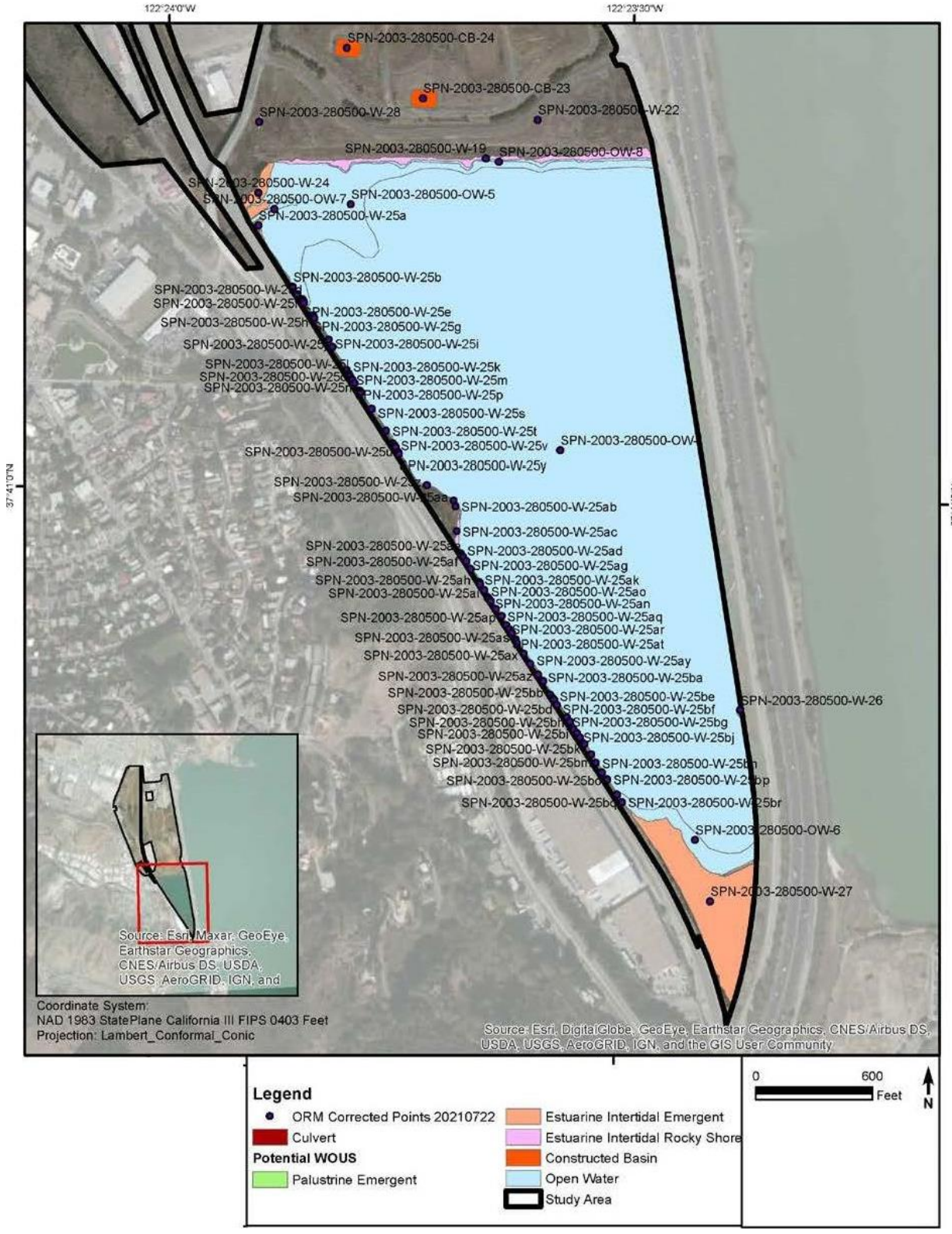
SOURCE: Metis 2022

Figure 4.6-2b: Delineated Potential Baylands Wetlands and Non-Wetlands Waters of the United States within the Central Portion of the Specific Plan Area



SOURCE: Metis 2022

Figure 4.6-2c: Delineated Potential Baylands Wetlands and Non-Wetlands Waters of the United States within the Southern Portion of the Specific Plan Area



SOURCE: Metis 2022

The Brisbane Lagoon is a vestige of the Bay that was not filled following construction of US Highway 101. It has limited marsh on its riprapped north and west shorelines (1.10 acres) and well-established tidal marsh on its northwest corner and south areas (0.40 and 4.90 acres, respectively). The tidal marsh fringe along the shoreline of the Brisbane Lagoon formed in response to the muted tidal exchange between the Bay and the lagoon through two box culverts. The lagoon also receives freshwater inflow from the Guadalupe outlet in the northwest corner; however, the tide from the Bay is the dominant hydrologic influence (Biohabitats 2023b).

*Arroyo Willow Thickets (*Salix lasiolepis *Shrubland Alliance)*

Arroyo willow thickets in the study area are composed of multi-trunked or multi-stemmed arroyo willow trees forming dense clusters of vegetation. This habitat occurs in association with wetland hydrology where wetlands have formed in the former railyard, to the north of the Kinder Morgan tank farm adjacent to the western leg of Visitacion Creek, along the drainage ditch on the west side of US Highway 101, on a narrow drainage ditch inlet to Visitacion Creek, at the northwestern corner of the Brisbane Lagoon, and at the southern toe of Icehouse Hill. The arroyo willow shrubland alliance is considered sensitive by the CDFW California Natural Communities List (CDFW 2022).

Seasonal Wetlands

Seasonal wetlands on-site support water from the onset of the rainy season in winter and are saturated through late spring, then typically dry up during the summer months. Seasonal wetlands generally occur in association with shallow topographic low points where drainage outlets are lacking or can occur adjacent to drainage ditches and creeks. Rainwater, or water from sheet flow originating on-site, fills local depressions for many continuous weeks during the rainy season, allowing for the germination of hydrophytic plants. In some cases, the extended period of inundation prevents the germination of any vegetation, and the basins are bare. Alternately, vegetation can be abundant and the seasonally inundated wetlands support annual and perennial vegetation such as rabbit's foot grass, nut-sedge (*Cyperus eragrostis*), bird's foot trefoil (*Lotus corniculatus*), bristly ox-tongue (*Helminthotheca echioides*), spikerush (*Eleocharis macrostachya*), Mediterranean barley, cattails (*Typha latifolia*), river bulrush (*Shoenoplectus fluviatilis*), brownhead rush (*Juncus phaeocephalus*), fat-hen (*Atriplex prostrata*), Bermuda grass (*Cynodon dactylon*), Bolander's rush (*Juncus bolanderi*), loosestrife (*Lythrum hyssopifolia*), and cutleaf plantain (*Plantago coronopus*).

Several small seasonal wetlands were identified in the central portion of the Specific Plan area (**Figure 4.6-2a** through **Figure 4.6-2c**). The former railyard supports large areas of seasonal wetlands in association with arroyo willow thickets. A mosaic has formed among the willows, with the aforementioned herbaceous species distributed by inundation within the shallow basins formed in the area. Several small seasonal wetlands are also found at the southern toe and slope of Icehouse Hill (Metis 2022).

*Cattail Marshes (*Typha angustifolia, domingensis, latifolia*] Herbaceous Alliance)*

Narrow leaf and broadleaf cattail (*Typha angustifolia* and *T. latifolia*) were recorded at the Specific Plan area in a monoculture emerging from depressions inundated with water. Cattail marsh habitat is found in the center of the former railyard and at the center of the Roundhouse structure where the turntable once operated. Cattail marsh also proliferates east of the Caltrain tracks in the central portion of the Specific Plan area along drainage ditches. The lands to the north of the Kinder Morgan Tank Farm similarly support cattail marsh (Metis 2022).

*Pickleweed Mats (*Sarcocornia pacifica *[*Salicornia depressa*] Herbaceous Alliance)*

Pickleweed mats are dominated by the species pickleweed (*Salicornia pacifica*), which forms a dense mat across the silty and/or muddy substrates that have a saline influence due to Bay connections. The soils within the Brisbane Lagoon and Visitacion Creek combined with the influx of brackish water from San Francisco Bay promote the growth of halophytes (salt-loving species) such as pickleweed along the edges of these water bodies. Pickleweed mats can be as narrow as a few feet in some areas and extend to a width of 200 feet in other locations, such as at the south end of the Brisbane Lagoon. Pickleweed habitat can support other common tidal salt marsh species such as saltgrass (*Distichlis spicata*), alkali heath (*Frankenia grandiflora*), fat-hen (*Atriplex prostrata*), and marsh gumplant (*Grindelia stricta* var. *angustifolia*) which are found commonly along Visitacion Creek and the edges of the Brisbane Lagoon. Several shrubs of quail brush (*Atriplex lentiformis*) were observed to occur along the western edge of the Brisbane Lagoon at the high tide line above the pickleweed mats in February 2022 (Metis 2022). The pickleweed mat alliance is considered sensitive by the California Department of Fish and Wildlife (CDFW) California Natural Communities List (CFDW 2022).

Pickleweed mats occur within the Specific Plan area along the north and south channel edges of Visitacion Creek and at its east end and bordering the northern shore and southern end of the Brisbane Lagoon. Pickleweed mats occur at the northwest corner of the lagoon in conjunction with a drainage fan of Guadelupe Valley Creek. The southernmost tip of the Brisbane Lagoon supports the largest contiguous acreage of pickleweed mat within the Baylands. Large stretches of the shore are covered with riprap that is currently unvegetated (Metis 2022).

Freshwater Drainage

Freshwater drainage ditches occur in the northern portion of the Baylands. The ditches consist of both artificially created and naturally developed drainage channels that support herbaceous wetland vegetation. Vegetation within the drainage habitat can consist of seasonal wetland species, but in some areas where they are lined with concrete or plastic, freshwater drainages do not support vegetation. The channels generally are linear in configuration and move water across the Specific Plan area (north to south) to receiving bodies downstream (Visitacion Creek) or to the Brisbane Lagoon (Metis 2022).

Tidal Wetland Drainage (Visitacion Creek)

Visitacion Creek is a tidal wetland drainage where pickleweed mats line either side of the bank, forming an average 7-foot-wide band of vegetation beginning at the ordinary high-water line extending up the bank. Visitacion Creek is connected directly to San Francisco Bay through a concrete box culvert beneath US Highway 101 and thus is tidally influenced. Throughout the day, the water elevation along the creek varies from the top edge of the pickleweed at high tide to exposed mud flat on either bank during low tide levels. Fresh water enters Visitacion Creek from the west and the north, and the creek is a main channel for local drainage (Metis 2022).

Mudflat

Mudflats are present adjacent to the low tide line along Visitacion Creek and at the creek's box culvert leading to the outfall to San Francisco Bay. Mudflats occur within the boundary of the Brisbane Lagoon at the northwestern corner and the southern tip in association with pickleweed mats. The mudflats have formed as a result of fine sedimentation (accretion) and the brackish water and long duration of inundation limits the vegetation growth. The very limited surface area of mudflats was not mapped along the Visitacion Creek channel edges but is visible along the Brisbane Lagoon (Metis 2022).

Special-Status Species

As stated above, most of the Specific Plan area is covered by ruderal and invasive vegetation species, reflecting its history of disturbance, development, and infill. Also present are native shrubs, saltgrass, riprap, tidal marsh, and the open waters of Visitacion Creek and Brisbane Lagoon. These habitats host small mammals, reptiles and amphibians, fish, aquatic invertebrates, songbirds, waterbirds, shorebirds, and common species of butterflies.

Special-status species are plants and animals legally protected under FESA, CESA, or other regulations or policies such as the California Fish and Game Code, the Migratory Bird Treaty Act, California Species of Special Concern, or plants identified as rare by the CDFW or the California Native Plant Society (CNPS). Database searches of the California Natural Diversity Database (CNDDB), the CNPS Electronic Inventory, and the USFWS Information for Planning and Conservation (IPaC) species list were used to identify an initial list of special-status species and designated critical habitats[129] that may occur at the Baylands. Following the completion of biological surveys and review of available technical reports, a qualified Environmental Science

[129] "Critical habitat" is habitat designated by the USFWS as defined in Section 7 of the federal Endangered Species Act. Critical habitat includes the specific areas occupied by a federally listed threatened or endangered species at the time it was listed that contain the physical or biological features that are essential to the species and that may need special management or protection. Critical habitat may also include areas that were not occupied by the species at the time of listing but are essential to its conservation. In contrast, "suitable habitat" is habitat featuring ecological characteristics that may provide for the breeding, feeding, resting, or sheltering of any endangered and/or threatened wildlife species.

Associates biologist evaluated the likelihood for special-status species to occur within the Baylands. The results of this assessment are shown in **Table 4.6-2**. Of the species analyzed in **Table 4.6-2**, four special-status plants (Bent-flowered fiddleneck [*Amsinckia lunaris*], San Francisco collinsia [*Collinsia multicolor*], Choris's popcorn-flower [*Plagiobothrys chorisianus* var. *chorisianus*], and San Francisco campion [*Silene verecunda* ssp. *verecunda*]), Callippe silverspot butterfly, Bay checkerspot butterfly, monarch butterfly, and Alameda song sparrow were determined to have suitable habitat within the Baylands and, therefore, a potential to occur. In addition, three special-status fish were determined to have a moderate likelihood of occurring in Bay waters near the Baylands site: steelhead trout, green sturgeon, and longfin smelt. The Biological Resources Technical Report (EIR Appendix D) provides a more thorough review of plants and wildlife from the region and their habitat requirements.

Sensitive Butterfly Species

Icehouse Hill is the only area within the Baylands with habitat potential for listed butterfly species. In addition, common mustards and wild radish that grow on portions of Icehouse Hill and on disturbed lands within the Baylands provide habitat for the large marble butterfly (*Euchloe ausonides ausonides*) (Coast Ridge Ecology 2024). This butterfly is not a special-status species but was petitioned for listing as a federal endangered species in 2023 and is therefore described in this EIR.

The northern flanks and top of Icehouse Hill have been grazed by between 8 to 13 horses since 1996. For the most part, the southern, eastern, and western portions of Icehouse Hill are too steep for horse grazing. Such grazing can have both positive and negative impacts on a grassland ecosystem. The positive effects of grazing can include removing thatch build-up, reducing non-native grasses, preventing shrub encroachment, and creating openings for low-growing native vegetation to germinate and spread. Negative effects can include soil compaction, erosion, and degradation of native butterfly host and nectar plants through overgrazing of plants and trampling of butterfly larvae and pupae.

Nearby San Bruno Mountain has an operating Habitat Conservation Plan and is considered a potential source population for the Callippe silverspot, Bay checkerspot, Mission blue, and San Bruno elfin butterfly (San Mateo County Parks Department 2008).

Table 4.6-2: Special-Status Species with the Potential to Occur within the Specific Plan Area

Common Name	Scientific Name	Listing Status: Federal/State/ Other	Habitat	Potential to Occur within the Specific Plan Area
Plants				
Franciscan manzanita	*Arctostaphylos franciscana*	FE/—/1B.1	The original natural setting for this species is presumed to be bluffs and hills surrounding San Francisco Bay.	**Absent.** The five known individual Franciscan manzanita plants all occur in the Presidio of San Francisco and are under cultivation. This species was not observed during surveys and is not expected on the Baylands.
San Bruno Mountain manzanita	*Arctostaphylos imbricata*	—/CE/1B.1	Restricted to chaparral and coastal scrub habitats on San Bruno Mountain.	**Absent.** No chaparral present on the Baylands. No manzanita observed in coastal scrub on the Baylands.
Bent-flowered fiddleneck	*Amsinckia lunaris*	—/—/1B.2	Coastal bluff scrub, valley, and foothill grassland.	**Moderate.** Potential habitat exists on Icehouse Hill. Documented from San Bruno Mountain.
San Francisco collinsia	*Collinsia multicolor*	—/—/1B.2	Sometimes on serpentine soils in coastal scrub.	**Moderate.** May occur in coastal scrub habitat on Icehouse Hill. Occurs on nearby Bayview Hill and on San Bruno Mountain (Wood 1996). No serpentine soils occur on the Baylands.
Dark-eyed gilia	*Gilia millefoliata*	—/—/1B.2	Stabilized coastal dunes.	**Low.** Dune habitat does not occur on the Baylands.
Choris's popcorn-flower	*Plagiobothrys chorisianus* var. *chorisianus*	—/—/1B.2	Mesic areas in coastal prairie, coastal scrub, and chaparral.	**Moderate.** Potential habitat exists on Icehouse Hill. Recorded from Visitacion Valley historically (1961).
San Francisco campion	*Silene verecunda* ssp. *verecunda*	—/—/1B.2	Sandy soils in valley and foothill grassland, coastal scrub, and chaparral.	**Moderate.** Suitable habitat exists on Icehouse Hill. Occurs on San Bruno Mountain.
Invertebrates				
Western bumble bee[130]	*Bombus occidentalis*	—/SC/—	Found in high elevation meadows, forests, riparian areas in the Sierra Nevada and Cascade Mountain ranges, and in coastal grasslands of northern California. Historical habitat included shrublands, chaparral, gardens, and urban parks from sea level to over 8,000 feet.	**Low.** Suitable flowering nectar plants are present within the Baylands; however, the site is highly disturbed as a result of historic fill, grading, and development. Last observed at San Bruno Mountain in 1968 with no recent sightings.

[130] Since the Baylands site is primarily composed of unconsolidated fill, there have been no sightings of sensitive bee species within the Baylands, and the last local sighting of the western bumble bee was in 1968, bee surveys and further analysis were not warranted.

Common Name	Scientific Name	Listing Status: Federal/State/ Other	Habitat	Potential to Occur within the Specific Plan Area
Crotch's bumble bee	*Bombus crotchii*	—/SC/—	Inhabits open grassland and scrub habitats. Nests are often located underground in abandoned rodent nests, or above ground in tufts of grass, old bird nests, rock piles, or cavities in dead trees. Food plants include the following families of native plants: *Asclepias*, *Chaenactis*, *Lupinus*, *Medicago*, *Phacelia*, and *Salvia.*	**Low.** Suitable flowering nectar plants have limited distribution in the Baylands as a result of historic fill, grading, and development. No nearby sightings are reported.
San Bruno elfin butterfly	*Callophrys mossii bayensis*	FE/—/—	Coastal scrub and bunchgrass grassland habitats and rocky outcrops and cliffs, with larval foodplant, *Sedum spathulifolium*; adults nectar on *Lomatium utriculatum*, *Achillea millefolium*, *Arabis blepharophylla*, *Erysimum franciscanum*, *Ranunculus californicus*, and *Fragaria californica*. All known locations are restricted to San Mateo County where several populations are known from San Bruno Mountain, Milagra Ridge, the San Francisco Peninsula Watershed, and Montara Mountain.	**Absent.** May fly over the Baylands but suitable scrub and bunchgrass habitat is not present.
Monarch butterfly	*Danaus plexippus, pop. 1*	FC/—/—	Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby.	**Moderate.** No known roost sites at the Baylands but suitable overwintering (eucalyptus) trees are present.
Large marble butterfly	*Euchloe ausonides ausonides*	PL/—/—	Occur in a variety of open habitats, including grasslands, meadows, and disturbed and weedy areas. Associated with common mustards found throughout the Sacramento Valley and San Francisco Bay areas.	**High.** Weedy mustards such as wild radish, field mustard, and black mustard provide potential caterpillar habitat on much of the site. An on-site occurrence is reported from June 2022 in the vicinity of Icehouse Hill (iNaturalist 2024).
Bay checkerspot butterfly	*Euphydryas editha bayensis*	FT/—/—	Found in serpentine grasslands. Host plants for the butterfly are *Plantago erecta*, *Castilleja densiflora*, and *C. exserta*.	**Moderate.** *Plantago* host plants identified on Icehouse Hill. Known to be present on San Bruno Mountain.
Mission blue butterfly	*Icaricia icarioides missionensis*	FE/—/—	Inhabits grasslands of the San Francisco Peninsula. Has three larval host plants: *Lupinus albifrons*, *Lupinus variicolor*, and *Lupinus formosus*.	**Low.** Present on San Bruno Mountain, within 0.25-mile of Icehouse Hill. Host plants not identified on the Baylands.
Callippe silverspot butterfly	*Speyeria callippe callippe*	FE/—/—	Found in native grasslands with *Viola pedunculata* as larval food plant.	**Moderate.** Host plant widespread on Icehouse Hill; species known to occur on San Bruno Mountain.
Myrtle's silverspot butterfly	*Speyeria zerene myrtleae*	FE/—/—	Restricted to the foggy, coastal dunes/hills of the Point Reyes peninsula; extirpated from coastal San Mateo County. Larval food plant thought to be *Viola adunca*.	**Absent.** The Baylands is out of the species' known range.

Common Name	Scientific Name	Listing Status: Federal/State/ Other	Habitat	Potential to Occur within the Specific Plan Area
Fish				
Chinook salmon (winter-run ESU)	*Oncorhynchus tshawytscha*	FE/SE/—	Ocean waters, Sacramento, and San Joaquin Rivers; Migrates from ocean through San Francisco Bay-Delta to freshwater spawning grounds. Aquatic portions of the Action Area are designated as Critical Habitat.	**Low.** Chinook salmon typically enter the Sacramento River from November to June and spawn from late-April to mid-August, with a peak from May to June. They inhabit nearshore coastal waters of Central California throughout the year, but especially during migration periods.
Chinook salmon (spring-run ESU)	*Oncorhynchus tshawytscha*	FT/ST/—	Ocean waters, Sacramento, and San Joaquin Rivers; Migrates from ocean through San Francisco Bay-Delta to freshwater spawning grounds.	**Low.** Chinook salmon typically enter the Sacramento River from November to June and spawn December to April. They inhabit nearshore coastal waters of Central California throughout the year, but especially during migration periods.
Steelhead Trout (Central California Coast Distinct Population Segment)	*Oncorhynchus mykiss*	FT	Requires cold, freshwater streams with suitable gravel for spawning. Rears in rivers and tributaries to the San Francisco Bay. San Francisco Bay is designated as Critical Habitat.	**Moderate.** Foraging and movement habitat is present near the Baylands in the Bay and Brisbane Lagoon; however, habitat is not present on-site.
Steelhead Trout (Central Valley Distinct Population Segment)	*Oncorhynchus mykiss*	FT	Ocean waters, Sacramento, and San Joaquin Rivers; Migrates from ocean through San Francisco Bay-Delta to freshwater spawning grounds. Aquatic portions of the Action Area are designated as Critical Habitat.	**Low.** Limited foraging habitat for this species within the Baylands. No streams supporting spawning runs are present within or in the vicinity of the Baylands. There is a moderate potential for occurrence during migration between the Sacramento River watershed and the Pacific Ocean.
North American green sturgeon, Southern Distinct Population Segment	*Acipenser medirostris*	FT/—/—	Within the marine environment, the Southern Distinct Population Segment occupies coastal bays and estuaries from Monterey Bay to Puget Sound in Washington. All of San Francisco Bay is designated Critical Habitat for green sturgeon.	**Moderate.** This species migrates from the Pacific Ocean to spawning habitat in the Sacramento River watershed but may forage in Bay waters near the Baylands.
Hardhead	*Mylopharodon conocephalus*	—/CSC/—	Found in relatively undisturbed habitats of larger streams with cool, clear water, slow velocities, and containing sand, gravel, and boulder substrates.	**Absent.** Suitable habitat is not present at the Baylands. Historical presence documented in Alameda and Coyote Creeks, tributaries of the San Francisco Bay, though current status is unknown.
Longfin smelt	*Spirinchus thaleichthys*	FC/ST/—	Found throughout the nearshore coastal waters and open waters of San Francisco Bay-Delta including the river channels and sloughs of the Delta. Spawns in the Delta.	**Moderate.** This species is documented consistently within open water habitat of Central San Francisco Bay, including the waters near the Baylands.

Common Name	Scientific Name	Listing Status: Federal/State/ Other	Habitat	Potential to Occur within the Specific Plan Area
Pacific herring	*Clupea pallasii*	SMCCF/—/—	San Francisco Bay is a major spawning ground for species. Preferred spawning substrate is eelgrass and algae but will also use pier pilings, riprap, and other rigid, smooth structures within Bay waters.	**Low.** This species spawns in San Francisco Bay and occurs throughout the San Francisco waterfront. However, no suitable habitat occurs in the vicinity of the Baylands.
Delta smelt	*Hypomesus transpacificus*	FT/SE/—	Open surface waters in the Sacramento–San Joaquin Delta. Seasonally in Suisun Bay, Carquinez Strait, and San Pablo Bay. Found in Delta estuaries with dense aquatic vegetation and low occurrence of predators.	**Absent.** Historically abundant throughout the Bay-Delta, now extremely rare. At present, primarily confined to Suisun Bay and a few tidal channels and flooded islands within Suisun Marsh and the Delta.
Tidewater goby	*Eucyclogobius newberryi*	FE/—/—	Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego County, to the mouth of the Smith River. Found in shallow lagoons and lower stream reaches.	**Absent.** Historically abundant. At present, no population exists in San Francisco Bay.
Reptiles and Amphibians				
Western pond turtle	*Emys marmorata*	—/CSC/—	An aquatic turtle of freshwater ponds, marshes, rivers, streams, and irrigation ditches with aquatic vegetation. Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 kilometers from water for egg-laying.	**Absent.** Tidal aquatic habitat in Brisbane Lagoon and Visitacion Creek is considered limiting for this species. There are also no nearby source populations for turtles to colonize the site. In addition, upland habitat is limited by roads and riprap.
California red-legged frog	*Rana draytonii*	FT/CSC/—	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby, or emergent riparian vegetation. Requires 11–20 weeks of permanent water for larval development. Must have access to aestivation habitat.	**Absent.** No suitable habitat present. Nearest occurrence located approximately 6 miles from the Baylands in Golden Gate Park, San Francisco County.
San Francisco garter snake	*Thamnophis sirtalis tetrataenia*	FE/SE/FP	Densely vegetated ponds and wetlands near open hillsides with small mammal burrows.	**Absent.** No suitable freshwater wetland habitat present. Species is extremely rare and exists in scattered populations on the San Francisco Peninsula.
California tiger salamander	*Ambystoma californiense*	—/ST/—	Lives in underground refuges, especially ground squirrel burrows throughout most of the year; in grassland, savanna, or open woodland habitats. Requires vernal pools or other seasonal water sources for breeding.	**Absent.** The Baylands is out of species' known range.
Birds				
Burrowing owl	*Athene cunicularia*	—/CSC, SC	Found in short grasslands with gentle slopes, such as pastures, fallow fields, and vacant lots with adequate small mammal burrows.	**Low (nesting).** Suitable open grasslands with short vegetation are scarce in the Baylands, and human disturbance is widespread. Due to the prior site management, ground squirrel host burrows are also lacking on-site. Non-nesting owls could pass through the site during winter but are not expected to take residency on the site.

Common Name	Scientific Name	Listing Status: Federal/State/ Other	Habitat	Potential to Occur within the Specific Plan Area
Marbled murrelet	*Brachyramphus marmoratus*	FT/SE/—	Feeds near-shore; nests inland along coast from Eureka to Oregon border and from Half Moon Bay to Santa Cruz. Nests in old-growth redwood-dominated forests, up to 6 miles inland, often in Douglas-fir.	**Absent.** Suitable habitat is not present at the Baylands.
Western snowy plover	*Charadrius nivosus nivosus*	FT/—/—	Sandy beaches, salt pond levees, and shores of large alkali lakes. Needs sandy, gravelly, or friable soils for nesting.	**Absent.** Suitable habitat is not present at the Baylands
Saltmarsh common yellowthroat	*Geothlypis trichas sinuosa*	—/CSC/—	Resident of the San Francisco Bay region, in fresh and saltwater marshes. Requires thick, continuous cover down to water surface for foraging; tall grasses, tule patches, willows for nesting.	**Low.** Known breeding range in coastal areas of San Francisco, but tidal marsh habitat at the Baylands is sparse and insufficiently dense to suit this species.
California black rail	*Laterallus jamaicensis coturniculus*	—/ST/FP	Inhabits freshwater marshes, wet meadows, and shallow margins of saltwater marshes bordering larger bays. Needs water depths of about 1 inch that do not fluctuate during the year and dense vegetation for nesting habitat.	**Low.** Freshwater and brackish marsh habitat is sparse and fragmented within the Baylands and species is rare in San Francisco Bay.
Alameda song sparrow	*Melospiza melodia pusillula*	—/CSC/—	Resident of salt marshes bordering south arm of San Francisco Bay. Inhabits *Salicornia* marshes; nests low in *Grindelia* bushes (high enough to escape high tides) and in *Salicornia*.	**Moderate.** Suitable foraging and nesting habitat are present along Visitacion Creek and areas of the Lagoon.
Short-tailed albatross	*Phoebastria (Diomedea) albatrus*	FE/CSC/—	Pelagic seabird that typically nests on remote islands in the Pacific Ocean. An individual was observed off the San Francisco coast in 2009.	**Absent.** Not expected near the San Francisco Bay.
California Ridgway's rail	*Rallus obsoletus*	FE/CE/—	Salt water and brackish marshes traversed by tidal sloughs in the vicinity of San Francisco Bay. Associated with abundant growths of pickleweed but feeds away from cover on invertebrates from mud-bottomed sloughs.	**Low.** Protocol surveys at the site were negative (Edelstein 2020). Tidal marsh habitat at the site is limited and highly disturbed, and not expected to support this species. Nearest documented occurrence of this species is 8.5 miles to the south in Redwood City.
Bank swallow	*Riparia riparia*	—/ST/—	Colonial nester; nests primarily in riparian and other lowland habitats west of the desert. Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, ocean to dig nesting hole.	**Absent.** Suitable habitat is not present at the Baylands.
California least tern	*Sterna antillarum browni*	FE/SE/FP	Nests along the coast from San Francisco Bay south to northern Baja California. Colonial breeder on bare or sparsely vegetated, flat substrates: sand beaches, alkali flats, landfills, or paved areas.	**Absent.** No nesting habitat is available at the Baylands, which is highly disturbed. The nearest nesting colony occurs in Alameda.

Common Name	Scientific Name	Listing Status: Federal/State/ Other	Habitat	Potential to Occur within the Specific Plan Area
Northern spotted owl	*Strix occidentalis caurina*	FT/ST/—	Old-growth forests or mixed stands of old-growth and mature trees. Occasionally in younger forests with patches of big trees. High, multistory canopy dominated by big trees, many trees with cavities or broken tops, woody debris, and space under canopy.	**Absent.** Suitable habitat is not present at the Baylands.
Mammals				
Townsend's big-eared bat	*Corynorhinus townsendii*	—/CSC/WBWG – H	Throughout California in a wide variety of habitats. Most common to mesic sites. Roosts in caves and in the open, hanging from walls and ceilings. Very sensitive to human disturbance.	**Low.** The Baylands has potential roosting habitat in disused structures; suitable foraging habitat is present overwater, but species is highly sensitive to disturbance.
Hoary bat	*Lasiurus cinereus*	—/—/WBWG-M	Prefers open habitats or habitat mosaics, with access to trees for cover and open areas or habitat edges for feeding. Roosts in dense foliage of medium to large trees. Feeds primarily on moths.	**Moderate.** Suitable open habitat with access to trees and habitat edges is provided at the Baylands.
Salt marsh harvest mouse	*Reithrodontomys raviventris*	FE/SE/FP	Only found in the saline emergent wetlands of San Francisco Bay and its tributaries. Pickleweed is primary habitat but may occur in other marsh vegetation types and in adjacent upland areas. Does not burrow; builds loosely organized nests. Requires higher areas for flood escape.	**Absent.** Tidal marsh habitat at the Baylands is limited and fragmented. Nearest occurrence of this species is approximately 8.5 miles south of the Baylands in Redwood City.
Marine Mammals				
California sea lion	*Zalophus californianus*	P/—/—	California sea lions reside in the Eastern North Pacific Ocean in shallow coastal and estuarine waters.	**Low.** California sea lions occur within the Bay-Delta while migrating to and from their primary breeding areas on the Farallon and California Channel Islands, and when high numbers of Pacific herring and salmon inhabit Bay-Delta waters. No breeding, pupping, or haul-out sites occur within the Baylands. However, a single individual was observed in the lagoon in 2020 (Biohabitats 2023a).
Harbor seal	*Phoca vitulina richardsii*	P/—/—	Near-shore Pacific species with up to 500 haul-out sites for the harbor seal distributed along their Pacific coast range.	**Low.** The harbor seal is a permanent resident in San Francisco Bay. Harbor seals have established haul out sites at Castro Rocks in San Pablo Bay, Yerba Buena Island in the Central Bay, and Mowry Slough in the South Bay.
Harbor porpoise	*Phocoena phocoena*	P/—/—	Near-shore species that inhabit northern temperate and subarctic coastal and offshore waters. In the North Pacific, they are found from Japan north to the Chukchi Sea and from Monterey Bay, CA, to the Beaufort Sea. They are most often observed in Bays, estuaries, harbors, and fjords less than 650 feet (200 meters) deep, like the San Francisco Bay-Delta.	**Absent.** Common in the vicinity of the Golden Gate Bridge and Richardson's Bay, rare south of the Bay Bridge and not expected in Visitacion Creek or Brisbane Lagoon.

Common Name	Scientific Name	Listing Status: Federal/State/ Other	Habitat	Potential to Occur within the Specific Plan Area
Bottlenose dolphin	*Tursiops truncatus*	P/—/—	The California coastal stock of bottlenose dolphin is relatively small. They spend most of the time in nearshore waters and thus can be frequently seen. Bottlenose dolphins are most often observed just east of the Golden Gate Bridge and within the Golden Gate; their presence may depend on the tides.	**Absent.** Common in the vicinity of the Golden Gate Bridge and Richardson's Bay, rare south of the Bay Bridge and not expected in Visitacion Creek or Brisbane Lagoon.
Gray whale	*Eschrichtus robustus*	P/—/—	Occurs in coastal California waters during late fall-winter southward migration and again late winter to early summer during their northward migration.	**Absent.** Seasonally present within San Francisco Bay during migration periods. This species could not pass through culverts into site waters.
Humpback whale	*Megaptera noveangli*	FE/—/—	The central California population of humpback whales migrates from their winter calving and mating areas off Mexico to their summer and fall feeding areas off coastal California. Humpback whales occur in San Francisco Bay from late April to November.	**Absent.** Seasonally present within San Francisco Bay between April and July. This species could not pass through culverts into site waters.

SOURCE: Environmental Science Associates

POTENTIAL FOR SPECIES OCCURRENCE RANKINGS:

Absent – The species was historically present but is either extirpated or has not been documented to be present or, if present, the presence is extremely rare.
Low – Suitable foraging or spawning habitat is present, but the species has either not been documented to be present or if present, the presence is infrequent.
Moderate – Suitable foraging or spawning habitat is present, and the species has been documented to be present for part of the year.
High – Suitable foraging or spawning habitat is present, and the species has been documented to be present throughout the year and/or in substantial numbers.

STATUS CODES:

Federal: National Oceanographic and Atmospheric Administration (NOAA); Marine Mammal Protection Act

P = Federally Protected

Western Bat Working Group (WBWG)

WBWG-H = High priority; species that are imperiled or at a high risk of imperilment
WBWG-M = Medium priority; species that warrant a closer evaluation due to potential imperilment

CNPS

1B.1 Plants rare, threatened, or endangered in California and elsewhere

Federal: NMFS; USFWS; FESA

FE = Listed as "endangered" (in danger of extinction) under FESA
FT = Listed as "threatened" (likely to become endangered within the foreseeable future) under FESA
FC = Candidate for federal listing
SMCCF = State-Managed California Commercial Fishery
PL = Petitioned for federal listing; no protected status

State: CDFW; CESA

SE = Listed as "endangered" under CESA
ST = Listed as "threatened" under CESA
SC = Candidate for state listing
CSC = California Species of Special Concern
FP = Fully Protected

Mission Blue Butterfly (*Icaricia icarioides missionensis*)

The Mission blue is a small, delicate blue and lavender butterfly with a wingspan of about 2.5 to 3.6 centimeters (1.0 to 1.5 inches). The Mission blue is restricted to grassland areas in which the preferred host species grow, including silver lupine (*Lupine albifrons*) and summer lupine (*Lupine formosus*). Varied lupine (*Lupine variicolor*) can host larvae only when it is associated with the previous two preferred host species. These plant species are present on the northeast ridge of the San Bruno Mountain State & County Park. This habitat is currently present and protected at San Bruno Mountain (San Mateo County Parks Department 2008).

As reported by Coast Ridge Ecology (2023), 180 Mission blue butterflies were recorded during transect surveys on San Bruno Mountain in 2021 (San Mateo County Parks Department 2022). Although Icehouse Hill is separated from San Bruno Mountain by roads and commercial development, the distance between Icehouse Hill and San Bruno Mountain is within the dispersal range of the Mission blue butterfly, which has been found to move up to approximately 0.25 miles between habitat patches. The species is likely to move further during multiple movements between habitat areas.

None of the Mission blue butterfly larval host plants (*Lupinus albifrons*, *L. variicolor*, and *L. formosus*) were detected during surveys of the Specific Plan area and this species is thus unlikely to occur on Icehouse Hill or other portions of the Baylands.

San Bruno Elfin Butterfly (*Callophrys mossii bayensis*)

The San Bruno elfin is a small brownish butterfly with a 1-inch wingspan. The host plant is the succulent stonecrop (*Sedum spathulifolium*), which grows between 900- and 1,075-feet elevation. On San Bruno Mountain, the host plant and the butterfly occur in the fog belt at the higher areas of the main ridge. Due to this altitude range and the absence of suitable scrub and bunchgrass habitat, the San Bruno elfin is unlikely to occur on Icehouse Hill or other portions of the Specific Plan area (San Mateo County Parks Department 2008).

Bay Checkerspot Butterfly (*Euphydryas editha bayensis*)

The Bay checkerspot is a medium-sized butterfly with a wingspan of 2 inches with black bands along wing veins that contrast with red, yellow, and white spots. The primary larval host plant is dwarf plantain (*Plantago erecta*), and the larvae use purple owl's clover (*Castilleja densiflora* or *Castilleja exserta*) as a second host plant.

This species was extirpated from San Bruno Mountain in the 1980s; however, the species was reintroduced to San Bruno Mountain beginning in 2017. Since then, several thousand Bay checkerspot larvae have been translocated to San Bruno Mountain from Coyote Ridge in Santa Clara County by Creekside Science biologists (San Mateo County Parks Department 2022). In

2021, there was estimated to be over 6,000 Bay checkerspot larvae on the mountain, and the larvae have been observed feeding on native host plants (Coast Ridge Ecology 2023).

Small numbers of *Plantago* host plants are present on Icehouse Hill (Coast Ridge Ecology 2023). However, the host plants for the Bay checkerspot are much more widespread than the butterfly, and, although host plants for the species were detected at Icehouse Hill, it is unlikely that Bay checkerspots are present due to the large distance (over 1 mile) between Icehouse Hill and the areas where the species is present on San Bruno Mountain.

Callippe Silverspot Butterfly (*Speyeria callippe callippe*)

The Callippe silverspot is large in comparison to the Mission blue or San Bruno elfin, with 2.5 inches of wingspan and an orange-brown pattern on both sides of its wings. The Johnny jump-up is the only host plant used by the Callippe silverspot to feed in their larval stages. This host plant is present in large numbers on Icehouse Hill (Coast Ridge Ecology 2023) and is also present at the adjacent San Bruno Mountain State & County Park. Johnny jump-up is found in mesic to dry open grasslands on both north and south-facing slopes. It can grow on disturbed road cuts and gopher mounds, under partial shade, and in transition areas between grasslands and scrub. Some of the surrounding Habitat Conservation Plan areas, such as the Carter/Martin management unit, have lost substantial amounts of Callippe silverspot habitat due to invasive weed infestations and brush succession over the past several decades (San Mateo County Parks Department 2008).

As reported by Coast Ridge Ecology (2023), Icehouse Hill is located within approximately 1000 feet of the San Bruno Mountain Habitat Conservation Plan area, which supports an extensive population of Callippe silverspots. In 2022, the San Mateo County Parks Department reported 266 Callippe silverspots seen during their biannual transect surveys (San Mateo County Parks Department 2022). Although Icehouse Hill is separated from San Bruno Mountain by roads and commercial development, the distance between Icehouse Hill and San Bruno Mountain is well within the flight range of the Callippe silverspot, which has been found to move up to approximately 0.75 miles between habitat patches (Thomas Reid Associates 1982) and can fly several hundred feet in a single traveling flight.

While Callippe silverspot was not observed in either the 2020 or 2023 surveys, San Bruno Mountain offers a potential source population for habitat patches within Icehouse Hill. The distance between Icehouse Hill and the easternmost point of San Bruno Mountain (the Carter-Martin management unit) is 0.23 miles. This is less than the reported 0.75-mile dispersal distance for Callippe silverspot.

Large Marble Butterfly (*Euchloe ausonides ausonides*)

The large marble is a medium-sized butterfly with characteristic white spots and yellow veining. In October 2023, the Xerces Society petitioned the USFWS to list the type subspecies of

the large marble butterfly as an endangered species (Xerces Society 2023). As of this publication, this subspecies is not regulated as a "special-status species" under CEQA and receives no legal protection under the California or Federal Endangered Species Acts. Several common noxious weeds that occur within natural, developed, and ruderal portions of the Baylands and Icehouse Hill provide potential large marble caterpillar food sources. Potential host plants for this species on the Brisbane Bay Lands property (wild radish and field mustard) are ubiquitous invasive species found throughout the San Francisco Bay Area and California (Coast Ridge Ecology, 2024). There is one reported observation of large marble within the Specific Plan area; an unverified occurrence from 2021 reported near the base of Icehouse Hill (Coast Ridge Ecology, 2024; iNaturalist 2024). This species may be encountered in association with disturbed and ruderal habitats at Icehouse Hill and elsewhere within the Baylands.

Sensitive Bird Species

California Ridgway's Rail (*Rallus obsoletus obsoletus*)

California Ridgway's rail, also known as California clapper rail, was listed as endangered on October 13, 1970. An updated recovery plan was finalized in August 2013 for this species (along with four other endangered species) in the *Recovery Plan for Tidal Marsh Ecosystems of Northern and Central California* (Recovery Plan) (USFWS 2013).

Ridgway's rail prefers larger marshes with high tide refugia and mudflats for foraging, and high density of channels and variety of marsh vegetation from cordgrass (*Spartina foliosa*) to high marsh gumplant (*Grindelia* sp.). Ridgway's rails are restricted almost entirely to the marshes of San Francisco estuary, where they inhabit a range of salt and brackish marshes. In south and central San Francisco Bay and along the perimeter of San Pablo Bay, rails typically inhabit salt marshes dominated by pickleweed (*Salicornia virginica*) and Pacific cordgrass. Pacific cordgrass dominates the middle marsh zone throughout the south and central Bay. Protocol-level surveys for the Ridgway's rail were conducted at Brisbane Lagoon February to March 2020 (Edelstein 2020) and did not find the species to be present. In addition, a reconnaissance survey in February 2023 found the tidal marsh habitat too small, disturbed, and fragmentary to support this species (ESA 2023).

Burrowing Owl (*Athene cunicularia*)

Western burrowing owl is a CDFW Species of Special Concern and state candidate for listing under the California Endangered Species Act. Potential impacts to burrowing owls and their nests fall under the jurisdiction of the Migratory Bird Treaty Act, CEQA, California Fish and Game Code Sections 3500, 3503.5, and 3800, and the California Endangered Species Act.

The burrowing owl is a small, predominantly diurnal ground-nesting bird. Burrowing owls are year-round residents in much of their range, including California (Shuford and Gardali 2008) and are found in a variety of annual grasslands and open areas with small mammal burrows.

Burrowing owls require low vegetative cover for vantage and adequate perch sites. Burrowing owls prefer level to gently sloping areas (Haug et al. 1993), such as annual grasslands, shortgrass prairie, pastures, hayfields, and fallow fields (Dechant et al. 2002). Burrowing owls also occur in urban and agricultural habitats adjacent to roads and railroads, irrigation ditches, and vacant lots where grasses are mowed (Dechant et al. 2002). Throughout California, western burrowing owls primarily use California ground squirrel (*Otospermophilus beecheyi*) burrows. Recent reconnaissance surveys did not observe suitable burrow habitat for this species; grasses and vegetation were too long for owl vantage, and open areas were prone to human and vehicle disturbance. Non-nesting owls are expected to sporadically pass through the site, but they are not expected to take residency on the site.

Wildlife Movement

Wildlife movement corridors are considered an important ecological resource by the CDFW and the USFWS. Movement corridors may provide favorable locations for wildlife to travel between different habitat areas such as foraging sites, breeding sites, cover areas, and preferred summer and winter range locations. They may also function as dispersal corridors, allowing animals to move between various locations within their range. Topography and other natural factors, in combination with human disturbance or urban development, can fragment or separate large open-space areas and wildlife habitats, thus impeding wildlife movement between areas of suitable habitat. This fragmentation creates isolated "islands" of habitat that are separated from other natural habitats. When available, wildlife movement corridors mitigate the effects of this fragmentation by allowing animals to move between remaining habitats, which in turn allows depleted populations to be replenished and promotes genetic exchange between separate populations.

The Brisbane Baylands site is not part of an established terrestrial wildlife movement corridor because it does not provide a connection between different habitat areas; rather, the site is isolated, and site conditions demonstrate the site history of industrial use areas. The site is physically separated from similar habitats that occur locally, such as those at San Bruno Mountain.

Terrestrial and Marine Species

Currently, there is little potential for regional movement of terrestrial wildlife species onto or through the Baylands site. Existing physical barriers to wildlife movement include major roads and highways, industry, railroad tracks, above-ground electrical utility lines, pipelines, and fences. Wildlife may move along Visitacion Creek and within the freshwater marshes in the western portion of the site, but such use would be limited.

Fish and other aquatic species may enter Brisbane Lagoon and Visitacion Creek through culverts under US Highway 101, but waters do not provide or connect to fish spawning habitat

for any species. Marine mammals occasionally stray into Brisbane Lagoon or visit while foraging, as noted when a sea lion entered Brisbane Lagoon in 2020 (Biohabitats 2023a). Such use is not, however, typical.

Butterflies

Although none of the four sensitive butterfly species has been observed, Icehouse Hill provides habitat patches for certain species with a potential wildlife connection to habitat on San Bruno Mountain. The distance between Icehouse Hill and the easternmost point of San Bruno Mountain is within the potential dispersal distance for Mission blue and Callippe silverspot butterflies. However, while host plants for the Callippe silverspot are present on Icehouse Hill, host plants for the Mission blue have not been identified. One small patch of the host plant for the Bay checkerspot, *Plantago erecta*, was detected at the southeastern corner of Icehouse Hill; however, although the host plant for the species was detected at Icehouse Hill, it is unlikely that Bay checkerspots have dispersed to Icehouse Hill as a result of the large distance (over 1 mile) between Icehouse Hill and the areas where the species is present on San Bruno Mountain.

Avian Species

The San Francisco Peninsula and Bay are a key link in the Pacific Flyway for migratory birds during spring and fall. Exposed bay mud along the shoreline provides important feeding and resting habitat for shorebirds. Migrating birds that forage in intertidal and marine environments may use San Francisco Bay during migration and may use the existing small pockets of habitat in Brisbane Lagoon to move between larger, contiguous habitat that is present on the Bay shoreline; however, because the terrestrial study area and shoreline are developed or highly disturbed, these areas do not offer high-quality habitat for migrating birds.

Fish Movement

Numerous fish species use open bay habitat and are expected to forage within Brisbane Lagoon, entering and leaving the lagoon with fluctuating tides. Such species may include the bat ray (*Myliobatis californica*), leopard shark (*Triakis semifasciata*), striped bass (*Morone saxatilis*), shiner surfperch (*Cymatogaster aggregata*), white croaker (*Genyonemus lineatus*), and jacksmelt (*Atherinopsis californiensis*); as well as smaller fish such as bay pipefish (*Syngnathus leptorhynchus*), three-spined stickleback (*Gasterosteus aculeatus*), northern anchovy (*Engraulis mordax*), topsmelt silverside (*Atherinops affinis*), Pacific staghorn sculpin (*Leptocottus armatus*), starry flounder (*Platichthys stellatus*), and yellowfin goby (*Acanthogobius flavimanus*), among many others.

c. Existing Off-Site Biological Resources

Offsite lands, including the relocation site for Fire Station No. 81, the existing Bayshore School, and the Martin Substation, have been fully urbanized and do not contain sensitive biological

resources. Offsite utility lines (potable and recycled water lines) would be installed underneath Bayshore Boulevard. Lands along the Bayshore Boulevard corridor include introduced vegetation along most of its length. Biological resources along the east side of Bayshore Boulevard adjacent to the Specific Plan were described above as part of the Specific Plan area.

4.6.3 REGULATORY CONTEXT FOR BAYLANDS DEVELOPMENT

a. Federal Laws, Plans, Programs, and Regulations

Federal Endangered Species Act of 1973, as amended (16 U.S.C. §§1531–1543)

The Federal Endangered Species Act (FESA) (16 United States Code [USC] § 1531 et seq.) and subsequent amendments provide guidance for the protection of plants and animals listed as endangered or threatened by the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS). In addition, FESA defines species as threatened or endangered and provides regulatory protection for listed species. FESA also provides a program for the conservation and recovery of threatened and endangered species as well as the conservation of designated critical habitat that the USFWS determines is required for the survival and recovery of these listed species.

Protection of Species not on a Federal or State List of Protected Species California Environmental Quality Act Guidelines Section 15380

Although threatened and endangered species are protected by specific federal and state statutes, CEQA Guidelines Section 15380(b) provides that a species not listed on the federal or state list of protected species may be considered rare or endangered if the species can be shown to meet certain specified criteria. Pursuant to its rarity status, any impacts to rare species could be considered a significant effect on the environment (CEQA Guidelines Section 15382). This section relates to situations where a project may have a significant effect on, for example, a candidate species that has not been listed by either the USFWS or the CDFW. CEQA also calls for the protection of other locally or regionally significant resources, including natural communities.

Applicable sections of the Federal Endangered Species Act include:

- Section 7, which requires federal agencies to consult with the USFWS, as appropriate, to ensure that the actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of threatened or endangered fish, wildlife, or plant species or result in the destruction or adverse modification of designated critical habitat for any such species. As part of the consultation, the USFWS and NMFS will issue a Biological Opinion and may include an incidental take statement for wildlife species to exempt the Section 9 take prohibition. A nexus for Section 7 consultation at the Specific Plan area would occur as a result of initiation of a federal permitting process such as pursuit of a permit from the USACE.

- Section 9 and its implementing regulations identify prohibited actions, including the "take"[131] of any fish or wildlife species listed under FESA as endangered or threatened, unless otherwise authorized by federal regulations. Although unauthorized take of a listed species is prohibited, take may be allowed when it is incidental to an otherwise legal activity. Section 9 prohibits the take of listed species of fish, wildlife, and plants without special exemption.
- Section 10, which provides a process by which non-federal entities may obtain an Incidental Take Permit from the USFWS or the NMFS for otherwise lawful activities that might incidentally result in "take" of endangered or threatened species, subject to specific conditions.

FESA requires the federal government to designate critical habitat for any species listed under FESA but also allows areas to be excluded from critical habitat (16 U.S.C., § 1533(b)(2)). Critical habitat is a specific area occupied by the species that is "essential for the conservation" of a threatened or endangered species and that "may require special management considerations or protection" (16 U.S.C., § 1532(5)(A)(i)). Critical habitat may also include specific areas outside the geographical area occupied by the species if the agency determines that the area itself is essential for conservation (16 U.S.C., § 1532(5)(B)). Critical habitat includes areas identified under Section 4 of the FESA (16 USC § 1532(5)(A)). Designated critical habitats are described in 50 CFR Parts 17 and 226.

Migratory Bird Treaty Act (16 USC §§ 703–712)

The federal Migratory Bird Treaty Act of 1918 (MBTA) is the domestic law that affirms and implements a commitment by the U.S. to four international conventions (with Canada, Mexico, Japan, and Russia) for the protection of a shared migratory bird resource. The Act provides that it shall be unlawful, except as permitted by regulations, to pursue, take, or kill any migratory bird, or any part, nest, or egg of any such bird (listed at 50 CFR Part 10.13 as modified by 75 Federal Register 9281). *Take* is defined broadly under the MBTA to include actions to pursue, hunt, capture, kill, collect, possess, sell, barter, and/or transport migratory birds, or to attempt such activities (16 U.S.C., § 703(a)). *Take* refers to both live and deceased birds and their parts, including feathers, nests, and eggs. The list of migratory bird species protected by the law is published by the USFWS and was most recently updated in 2020 (50 C.F.R., § 10.13). The Act

[131] The term "take" includes actions to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. "Harm" includes significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns related to breeding, feeding, or shelter. "Harass" includes actions that create the likelihood of injury to listed species by disrupting normal behavioral patterns related to breeding, feeding, and shelter significantly. The definition of "harm" includes significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns related to breeding, feeding, or shelter. "Harass" is defined as actions that create the likelihood of injury to listed species by disrupting normal behavioral patterns related to breeding, feeding, and shelter significantly.

also applies to disturbance and removal of nests occupied by migratory birds or their eggs during the breeding season, whether intentional or incidental.

The Migratory Bird Treaty Reform Act of 2004 amends Sections 703 to 712 such that 94 non-native bird species that have been introduced by humans to the United States or its territories are excluded from protection. Thus, only species considered that were native to the United States in 1918 are included.

The U.S. Department of the Interior's Office of the Solicitor issued a legal, revised interpretation (Opinion M-37050) of the Migratory Bird Treaty Act's prohibition on the take of migratory bird species. Opinion M-37050 concludes that "consistent with the text, history, and purpose of the MBTA, the statute's prohibitions on pursuing, hunting, taking, capturing, killing, or attempting to do the same apply only to affirmative actions that have as their purpose the taking or killing of migratory birds, their nests, or their eggs." According to Opinion M-37050, take of a migratory bird, its nest, or eggs that is incidental to another lawful activity does not violate the MBTA, and the MBTA's criminal provisions do not apply to those activities. Opinion M-37050 affects how the MBTA is interpreted regarding incidental take (i.e., take that is incidental to otherwise lawful activities), but it does not legally change the regulation itself.

The Ninth Circuit Court of Appeals, the controlling federal appellate court for California, has also held that habitat modification that harms migratory birds "does not 'take' them within the meaning of the MBTA" (Seattle Audubon Soc. v. Evans, (1981) 952 F.2d 297, 303). The current list of species protected by the MBTA can be found in Title 50 of the CFR, Section 10.13. The list includes nearly all birds that are native to the U.S.

Marine Mammal Protection Act

The Marine Mammal Protection Act (50 CFR 216) prohibits, with certain exceptions, the take of marine mammals in U.S. waters and by U.S. citizens on the high seas, and the importation of marine mammals and marine mammal products into the United States. This Act defines "take" as hunting, harassing, capturing, or killing any marine mammal or attempting to do so. "Harassment" is defined as any act of "pursuit, torment, or annoyance" that has the potential to injure a marine mammal or cause disruption of essential behavioral patterns, including feeding, sheltering, migration, breeding, nursing, or breathing. Most of the Act's provisions are related to commercial fishing and subsistence hunting. The Act also outlines procedures for obtaining permits for the take of small numbers of marine mammals, incidental to otherwise legal activities.

b. State Laws, Plans, Programs, and Regulations

California Endangered Species Act (California Fish and Game Code §§ 2050 et seq.)

The California Endangered Species Act (CESA) establishes the policy of the state to conserve, protect, restore, and enhance rare, threatened, or endangered species and their habitats. CESA mandates that state agencies do not approve projects that would jeopardize the continued existence of threatened or endangered species if reasonable and prudent alternatives are available that would avoid jeopardy. The state definition of *take* means "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill" and is similar to the federal definition, except that Section 2080 does not prohibit indirect harm to listed species by way of habitat modification (Cal. Fish & G. Code, § 86). Proponents of a project affecting a state-listed species must consult with the CDFW and enter into a management agreement and take permit under Section 2080. For projects that would affect a listed species under both the state and federal Endangered Species Acts, compliance with the FESA would satisfy the state requirements if the California Department of Fish and Wildlife determines that the federal incidental take authorization is "consistent" with the CESA under California Fish and Game Code Section 2080.1. Comparable to the FESA process, the CESA contains a procedure for the CDFW to issue a Section 2081 Incidental Take Permit authorizing the take of listed and candidate species incidental to an otherwise lawful activity, subject to specified conditions, including that the take impacts are fully mitigated, and the permit is consistent with any regulations adopted pursuant to any recovery plan for the species.

California Fish and Game Code Sections 2080 and 2081

Section 2080 of the California Fish and Game Code states, "No person shall import into this state [California], export out of this state, or take, possess, purchase, or sell within this state, any species, or any part or product thereof, that the [State Fish and Game] Commission determines to be an endangered species or threatened species, or attempt any of those acts, except as otherwise provided in this chapter, or the Native Plant Protection Act, or the California Desert Native Plants Act." Pursuant to Section 2081, the CDFW may authorize individuals or public agencies to import, export, take, or possess state-listed endangered, threatened, or candidate species. These otherwise prohibited acts may be authorized through permits or Memoranda of Understanding, if the take is incidental to an otherwise lawful activity, impacts of the authorized take are minimized and fully mitigated, the permit is consistent with any regulations adopted pursuant to any recovery plan for the species, and the project operator ensures adequate funding to implement the measures required by the CDFW. The CDFW makes this determination based on available scientific information and considers the ability of the species to survive and reproduce.

Migratory Birds and Raptors - California Fish and Game Code Sections 3503, 3503.5, 3513, and 3800

California Fish and Game Code Sections 3503, 3503.5, 3513, and 3800 prohibit a project operator from conducting activities that would result in the taking, possessing, or destroying of any birds of prey; the taking or possessing of any migratory nongame bird; the taking, possessing, or needlessly destroying of the nest or eggs of any raptors or nongame birds; or the taking of any nongame bird pursuant to Fish and Game Code Section 3800, whether intentional or incidental.

Lake and Streambed Alteration Agreements - California Fish and Game Code Sections 1600–1616

California Fish and Game Code Sections 1600 through 1616 regulates habitats potentially under the regulatory jurisdiction of the CDFW. If a project includes alteration of the bed, banks, or channel of a stream or of the adjacent riparian vegetation, then a Lake and Streambed Alteration Agreement (LSAA) may be required from the CDFW. Fish and Game Code Section 1602 requires an entity to notify the CDFW prior to commencing any activity that may (1) substantially divert or obstruct the natural flow of any river, stream, or lake; (2) substantially change or use any material from the bed, channel, or bank of any river, stream, or lake; or (3) deposit debris, waste, or other materials that could pass into any river, stream, or lake. A Lake and Streambed Alteration Agreement covers activities that would result in the modification of the bed, bank, or channel of a stream, river, or lake, including water diversion and damming and removal of vegetation from the floodplain to the landward extent of the riparian zone (the top-of-bank). It governs both activities that modify the physical characteristics of the stream and activities that may affect fish and wildlife resources that use the stream and surrounding habitat (i.e., the riparian vegetation or wetlands). A Section 1602 Lake and Streambed Alteration Agreement will often require mitigation, such as revegetation or replanting of riparian trees or other compensatory mitigation for impacts to these resources.

Native Plant Protection Act (California Fish and Game Code §§ 1900 et seq.)

California's Native Plant Protection Act requires all state agencies to use their authority to carry out programs to conserve endangered and rare native plants. Provisions of the Act prohibit the taking of endangered or rare plants from the wild and require notification of the CDFW at least 10 days in advance of any change in land use in areas that support listed plants.

Vascular plants that are identified as "rare" by the CDFW, but that may have no designated status or protection under federal or state endangered species legislation, are protected under Fish and Code, Section 1900 et seq. Additionally, plants identified as California Rare Plant Rank (CRPR) 1A, 1B, or 2 meet the definition of Section 1901, Chapter 10 (NPPA) and Sections 2062

and 2067 (CESA) of the California Fish and Game Code. California rare plant ranks are defined as follows:

- **Rank 1A:** Plants Presumed Extinct.
- **Rank 1B:** Plants Rare, Threatened, or Endangered in California and elsewhere.
- **Rank 2:** Plants Rare, Threatened, or Endangered in California, but more numerous elsewhere.
- **Rank 3:** Plants about Which More Information is Needed – A Review List.
- **Rank 4:** Plants of Limited Distribution – A Watch List.

In general, plants tracked by the CDFW California Natural Diversity Database (CNDDB) as California Rare Plant Ranking 1A, 1B, or 2 are considered to meet the criteria of California Environmental Quality Act (CEQA) Guidelines Section 15380 and effects on these species are considered "significant." These also meet the criteria for protection under Section 1901, Chapter 10 (Native Plant Protection Act) and Sections 2062 and 2067 (CESA) of the California Fish and Game Code. CRPR 3 and 4 plant taxa do not automatically meet CEQA standards and thresholds for impact considerations, but some species still may warrant protection under CEQA Guidelines Section 15380(b) based on declining trends, recent taxonomic information, or other factors. Such taxa were considered in the evaluation of potential impacts to rare plants.

c. Regional Plans, Programs, and Regulations

San Bruno Mountain Habitat Conservation Plan

The San Bruno Mountain Habitat Conservation Plan (SBMHCP) was adopted in 1983 to protect and improve habitat for several species of endangered butterflies. The SBMHCP is an effort to address the problem of potential extinction of these endangered butterflies while providing for development of privately owned land.

While the Baylands site is not directly subject to the provisions of the SBMHCP, Icehouse Hill, which provides potential habitat for the Mission blue and Callippe silverspot butterflies, is directly adjacent to the eastern boundary of the SBMHCP planning area.

Management recommendations are presented by the SBMHCP by parcel, three of which are adjacent to Bayshore Boulevard and in close proximity to Icehouse Hill and the Baylands. SBMHCP recommendations for these parcels include the following:

1. Assessment of freshwater seep wetland habitats for San Francisco garter snake;
2. Consideration of parcels for upgrade of habitat quality;

3. Enhancement of habitat corridors with butterfly host plant species to attract butterflies and facilitate movement to larger habitat areas;
4. Elimination of dense patches of exotic plants and brush to expand usable habitat area for butterflies;
5. Creation of a reclamation plan to prevent erosion after development; and
6. Monitoring of habitat characteristics.

d. City of Brisbane Plans, Ordinance, and Regulations

General Plan

Chapter VII: Open Space Element

The General Plan Open Space Element presents the following biological-resources-related policies and programs:

Policy 81: The City shall conduct an ongoing effort to identify sites or portions of sites having particular value as open space, wildlife habitat, wetlands, or other environmental qualities that should be preserved and protected. In such cases, the City shall explore the feasibility of acquisition of these areas by the City or by other public or private agencies that are engaged in the ownership and preservation of open space, and, when legally possible, imposing a requirement that such areas be dedicated by the owner to the public for open space purposes.

Policy 81.1: Work to preserve open space lands to protect the natural environment and to provide outdoor educational and recreational opportunities consistent with the sensitivity of the resource.

Policy 82: Encourage the preservation, conservation and restoration of open space to retain existing biotic communities, including rare and endangered species habitat, wetlands, watercourses and woodlands.

Policy 85: Encourage the preservation and conservation of aquatic resources in Brisbane: the Lagoon, the Bayfront and the Marsh.

Program 85a: Seek opportunities to utilize aquatic areas for recreational and educational activities consistent with the sensitivity of the resource.

Program 85b: Develop provisions in the Zoning Ordinance, including setback requirements, to protect the natural ecology of aquatic resources.

Program 85c: Provide information to citizens on the eco-systems of the Bay, the Lagoon and the Wetland Marsh and how citizens can participate in respecting and conserving these resources.

Program 85d: Work with responsible agencies, property owners and environmental and conservation groups to ensure preservation of aquatic eco-systems.

Chapter IX: Conservation Element

The General Plan Conservation Element presents the following biological-resources-related policies and programs:

Policy 118: Preserve areas containing rare and endangered species habitat to the extent allowed by law and available resources.

Policy 120: Cooperate with local, State and Federal agencies in conservation efforts for biological resources.

Policy 122: Cooperate with other agencies in conservation efforts.

Program 122a: Work with the Habitat Conservation Plan Operator, the State Department of Fish and Game, the U. S Fish and Wildlife Service, and other agencies as appropriate regarding plans and programs that may affect biological resources in the planning area.

Program 122b: Consult the maps in the technical background reports and information supplied by responsible agencies to determine potential for environmental impacts to biological resources and take appropriate action.

Program 122c: Consult with local, State and Federal agencies to determine when field studies are required to supplement or update existing data.

Program 122e: Encourage applicants to initiate early CEQA consultation on conservation issues.

Policy 123: Conserve important biological communities through sensitive project design.

Program 123a: In land use development applications, consider the siting of structures and utilities so as to conserve identified biological communities.

Policy 127: Encourage the use of plants that are compatible with the natural flora in landscape programs.

Policy 128: Encourage the use of native plants in landscape programs that provide food and shelter to indigenous wildlife.

Program 128a: Encourage conservation groups to provide public information on plant materials.

Policy 130.1: The City requires restoration of wetland losses. The determination of which land areas are wetlands will be done by those Federal and State agencies having jurisdiction. The City, however, is especially concerned with those wetlands surrounding the perimeter of the Brisbane Lagoon, the Bay shoreline, the Levinson Marsh and the Quarry sediment ponds. The ratios of restoration may exceed the regulatory agencies' mitigation minimums.

Policy 130.4: Wetland and mitigation areas that are mitigations for project impacts must be protected by recorded deed restrictions.

Policy 130.5: It is Brisbane's desire that mitigation for Brisbane's wetland losses occur somewhere within the jurisdictional boundaries or sphere of influence of the City of Brisbane, if feasible.

Policy 131: Emphasize the conservation of water quality and of riparian and other water-related vegetation, especially that which provides habitat for native species, in planning and maintenance efforts.

Policy 132: Recognize the importance of the Brisbane Lagoon and the Levinson Marsh as wildlife habitats, valuable community resources and drainage basins, and cooperate with responsible agencies in their conservation.

Chapter XII: Policies and Programs by Subarea

This chapter of the General Plan presents the following relevant biological-resources-related policies specific to the Baylands:

Policy BL.1 H: Key habitat areas, including Icehouse Hill and Brisbane Lagoon and adjacent habitat as identified in the 2001 City Open Space Master Plan shall be preserved, enhanced, and protected.

Policy BL.16: Enhance the natural landform and biotic values of Icehouse Hill and preserve its ability to visually screen the Tank Farm.

Policy BL.19: Establish a buffer zone between the Lagoon and adjacent uses.

Policy BL.20: Dedicate land area for open space, recreational uses and wetlands restoration, especially around the Lagoon.

Policy BL.23: Investigate methods to improve water quality in the Lagoon without adversely impacting waterfowl and fish.

Policy BL.24: Seek opportunities to enhance and restore wetlands in consultation with responsible agencies.

e. Open Space Plan for the City of Brisbane

To aid in the implementation of selected programs and policies of Brisbane's General Plan, an Open Space Plan for the City of Brisbane has been approved which contains open space inventory, analysis, and policy recommendations. The Open Space Plan was approved by the City Council in August 2001, and "offers a vision for a comprehensive and integrated open space system for the city and is intended to be a flexible, working tool to guide the City Council in implementing specific environmental policies and programs from the 1994 Brisbane General Plan," including Program 93h of the General Plan, which states, "for reference and assistance in establishing open space priorities, prepare a comprehensive map of vacant lands on the planning area and update the map annually." The recommendations within this plan reflect the most significant natural and open space resources in the city and establish overall guidelines and/or criteria for decision making. The Open Space Plan addresses the possibility of land acquisition or preservation based on identification and evaluation of natural resources and amenities within the jurisdictional boundaries of the City of Brisbane.

Open Space Resources Evaluation and Priorities

The Open Space Plan includes open space and resource protection recommendations for the Baylands. The area north of Visitacion Creek is envisioned for new development with "substantial" open space (minimum or 25 percent of developed areas to be devoted to open space). The area east of the tank farm between Visitacion Creek and Brisbane Lagoon is envisioned for "maximized open areas" (recreational or other use with open character), while the lagoon area is envisioned as open space to be dedicated to a public agency for permanent preservation. **Figure 3-45** in Draft EIR Chapter 3, *Project Description*, also shows the proposed Bay Trail extension, as well as other local trails within the Baylands that are identified in the Open Space Plan.

The Brisbane Lagoon occupies the southern portion of the Specific Plan area and is a valuable aquatic resource that contains tidal wetlands. There is a fishing area, locally known as Fisherman's Park, located on the lagoon's northeastern perimeter. The Open Space Plan recommends that the lagoon and its environs be conserved as open space, and that a public pathway be developed around the lagoon perimeter, linking with the future Bay Trail and Tunnel Avenue trail. Additionally, the Open Space Plan recommends that the area along the entire shoreline at the northern end of the lagoon, between the lagoon and Lagoon Way, be

preserved as open space as it provides significant recreational opportunities, noting that this "would be a very high priority open space area."

Open Space Preservation Strategies

The Open Space Plan identified specific open space preservation strategies for each General Plan Subarea. The following preservation strategies apply to the Northeast Bayshore, Baylands, and Beatty Subareas:

a. Refer to this Open Space Plan and use it as a guide in reviewing development proposals and city-sponsored plans for use of the land in these subareas;

d. Pursue the dedication of easements, where applicable, for trails and the Wetland River Park; and;

e. Incorporate open space dedication and open area planning as part of the specific planning portion of the planned development process, when applications are made to the City, utilizing this Plan as the guiding principles.

Use and Management Policies

The Open Space Plan contains the following relevant policies:

General Management Policies

a. Open space is to be maintained in a natural condition as much as possible, except in redeveloped areas where trail corridors and open space may be tied into the overall development landscape theme.

b. New open space acquisitions, major open space restoration or management, trail construction or any significant trail alterations or improvements should be consistent with this plan. The City Council, Planning and Park and Recreation Commissions and City staff may refer these matters to the Open Space and Ecology Committee for review and recommendation.

d. Native habitat restoration efforts should be undertaken where practical, in conjunction with the HCP operators, and consistent with other City policies.

f. The City will take responsibility for monitoring open space or trail easements and conditions of approval on private open areas.

h. No plants, animals, or other resources are to be collected or disturbed except in conjunction with a city approved and coordinated resource management project.

i. The city recognizes that restoration, maintenance and management of natural or improved open space areas can be a significant initial and ongoing expense.

j. Public and private open spaces and open areas have been demonstrated to add significant direct and indirect value to properties adjacent and in the region.

Baylands and Beatty Subareas Open Space and Trails

a. Open space land may be acquired or dedicated in these subareas in conjunction with future commercial development. Planning and implementation of resource protection and restoration will be part of the scope of the development projects.

b. New trails may be planned and constructed in these subareas in conjunction with future commercial development, including portions of the San Francisco Bay Trail. Planning and construction of these trails and related improvements will be part of the scope of the development projects.

c. The design and use and management arrangements for trails in these areas will be determined in conjunction with future planning for commercial development.

d. Assessments will be placed on future developments to help pay for ongoing maintenance and management of the open space in these areas that will provide benefit to the properties subject to assessment.

e. This land includes areas with toxic contamination. Reclamation of natural landscapes will require planning and implementation of cleanup and restoration by qualified scientists and contractors.

f. City of Brisbane Tree Ordinance

Brisbane Municipal Code Title 12, Chapter 12.12 requires a permit for removal of protected trees, or any other tree having a trunk that is greater than 30 inches in diameter at a height of 24 inches above grade. Pursuant to the provisions of Municipal Code Section 12.12.040 B, the following do not require tree removal permits:

1. **Emergencies.** If the condition of a protected tree presents an immediate hazard to life or property, it may be removed without a permit on order of the city manager, the city engineer, the planning director, the chief of police, or the fire chief.
2. **City Employees.** This chapter shall not apply to the removal of any trees on city-owned property by city employees or any person retained by the city for the purpose of removing such trees.
3. **Public Utilities.** Public utilities subject to the jurisdiction of the State Public Utilities Commission may without a permit take such action as may be necessary to comply with the safety regulations of the commission and as may be necessary to remove a direct and immediate hazard to their facilities within the public utility lands or easement areas in which the same may be located.

4. **Project Approval.** Where removal of a protected tree has been authorized as part of a development approval granted by the city, no permit shall be required under this chapter for removal of such tree.

A tree, as defined by the Municipal Code Section 12.12.040, is "a woody perennial plant characterized by having a main stem or trunk, or a multi-stemmed trunk system with a more or less definitely formed crown, and [that] is usually over ten (10) feet high at maturity." Protected trees, as defined by the Municipal Code, are any of the following:

1. Any California bay (*Umbellularia californica*), coast live oak (*Quercus agrifolia*), or California buckeye (*Aesculus californica*) having a main stem or trunk that measures 30 inches or greater in circumference at a height of 24 inches above natural grade.
2. Any species of native or non-native tree, in addition to those identified in subsection (1) above, designated as a protected tree on recommendation of the Parks, Beaches and Recreation Commission as adopted by resolution of the City Council, based upon its finding and determination that such species uniquely contributes to the scenic beauty of the city or provides special benefits to the natural environment or wildlife.
3. Any tree designated as a protected tree by resolution of the City Council.
4. Any tree, regardless of size, originally required by the City to be planted as a condition for the granting of a permit, license, or other approval, or any tree that existed at the time of the granting of such permit, license, or other approval and required by the City to be preserved as part of such approval.
5. Any tree, regardless of size, required by the City to be planted as a replacement for an unlawfully removed tree.
6. Any tree, regardless of size, planted or maintained by the City.
7. Any street tree that is not otherwise described in subsections (1) through (6) above, having a main stem or trunk that measures 30 inches or greater in circumference at a height of 24 inches above natural grade.

The Municipal Code further provides that, where three or more trees of any one or more species, each having a main stem or trunk that measures 30 inches or greater in circumference at a height of 24 inches above natural grade, are proposed to be removed at the same time from the same property or from contiguous properties under common ownership, such trees shall collectively be regarded as a protected tree (Section 12.12.040).

The Municipal Code requires that an application for a tree removal permit be made to the city manager and contain the number and location of each tree to be removed, the type and approximate size of each tree, the reason for removal, and additional information that the City Manager may require. Removal permits may be granted subject to conditions including, but not limited to, requiring planting of one or more replacement trees (Section 12.12.050).

4.6.4 RELEVANT SPECIFIC PLAN PROVISIONS

The Specific Plan provides for preservation and enhancement of on-site habitat areas, site drainage and water quality treatment functions, and public access to recreation within natural settings within three primary areas (Icehouse Hill, Visitacion Creek, and Lagoon Park) and other locations within the site. Icehouse Hill's ecological functions are to be improved through protection, enhancement, and restoration of native grasslands, coastal scrub, and small pockets of seasonal wetlands (see **Figure 3-24** in Draft EIR Chapter 3, *Project Description*). Planting of native butterfly host species is proposed to increase butterfly habitat extent and quality. Invasive species management would be undertaken due to the presence of Eucalyptus sp., fennel, and other non-native species.

The Specific Plan's Conservation and Open Space Plan proposes the creation of tidally influenced marsh/wetlands, freshwater marsh/wetlands, subtidal mudflats, and re-construction of Visitacion Creek itself. Proposed freshwater marsh restoration would include seasonally depressed freshwater wetlands above the proposed ecotone slope, on shelves extending from either side of the tidal marsh, to be sustained by runoff generated from designed drainage areas. In addition, water from the freshwater wetlands would be designed to seep into the ecotone slope during periods with higher water levels. Revegetation would include locally native species appropriate to freshwater and tidal wetlands. Proposed restoration areas and plans are illustrated in the following figures:

- **Figure 3-13**, Proposed Baylands Open Space Network
- Visitacion Creek
    - **Figure 3-22**, Visitacion Creek Illustrative Concept Diagram
    - **Figure 3-22a**, Visitacion Creek Section A-A'
    - **Figure 3-22b**, Visitacion Creek Section B-B'
    - **Figure 3-22c**, Visitacion Creek Section C-C'
    - **Figure 3-22d**, Visitacion Creek Section D-D'
- North Shore of the Brisbane Lagoon (Lagoon Park)
    - **Figure 3-19**, Lagoon Park Illustrative Concept Diagram
    - **Figure 3-20**, Biotic Habitat Zones within and adjacent to the Brisbane Lagoon
    - **Figure 3-21a**, Proposed Lagoon Edge Enhancement (Existing) and **Figure 3-21b**, and Proposed Lagoon Edge Enhancement (Proposed)

a. Visitacion Creek Restoration

The illustrative concept diagrams cited above show that Visitacion Creek is proposed to be reconstructed, expanded, and vegetated with riparian vegetation in approximately the same location, with adjacent overflow basins, habitat islands, and adjacent tidal marsh with gentler slopes, transitioning to an ecotone slope that includes restored and enhanced adjacent tidal flats, tidal marsh wetlands, and freshwater wetlands. The existing culverted service road crossing that drains to Visitacion Creek would be improved by replacement of the western Tunnel Avenue culvert with either a bridge or new culvert and by the replacement of an eastern culvert to a wider-spanning bridge at Sierra Point Parkway. Upland buffers would be located outside the freshwater wetlands to allow for migration of landcover due to sea level rise and to provide protection from human and animal disturbance.

b. Restoration along the North Shore of the Brisbane Lagoon

The illustrative concept diagrams cited above designate the tidal flats area located along the north shore of the Lagoon as "Open Area Protection." Ground disturbance north of the tidal flats up to the relocated Lagoon Road is required for restoration and enhancement of existing habitat and stormwater features. Enhancements to tidal flats, tidal marsh wetlands, and freshwater wetlands would be provided along with recreational amenities along the north shore of Brisbane Lagoon within Lagoon Park. Also proposed is modifying the existing riprap along the north edge of the lagoon to create a gentler slope and habitat area by covering the rip rap with soil and vegetating the area.

Overall, physical improvements in this area will remain largely naturalized, but also include amenities that provide educational/recreational community spaces and means for accessibility. Park amenities include at-grade walks and bikeways, an elevated walk, wildlife observation areas, gardens, play spaces, picnic areas, and limited parking.

c. Human/Pet Interference within Restored Wetlands and Sensitive Habitats on Icehouse Hill

The Specific Plan further (Sections 5.4.3 and 5.4.4) requires the following to control visitor and/or pet disturbance to sensitive species or habitats:

- Adjacent upland areas will be designed to serve as habitat buffers.
- Where needed, physical barriers, such as chain-link fencing[132] or equivalent screening, will be maintained. Barriers will be at least three feet high with native vegetation planted on either side to keep dogs, cats, and other household pets out of water-related habitats.

[132] Split rail fencing may be adequate to prevent entry into rare plant areas.

- Educational/interpretive signage will be provided, which typically includes information about the sensitivity of the habitats, and signage requiring visitors to remain on trail pathways and pets, if allowed, to be kept on leash.

With respect to litter or debris, Section 8.16.060 of the City of Brisbane's Municipal Code requires that "The owner or person in control of any private property shall at all times maintain the premises free of litter; provided, however, that this section shall not prohibit the storage of litter in authorized private receptacles for collection." Therefore, the Baylands would be required (by the City's Municipal Code) to be kept free of litter or debris that could potentially impact sensitive or common biological resources.

d. Bird Strike Protection

The Specific Plan's Development Standards require that buildings taller than 100 feet employ the following bird-friendly design strategies:

- Consult a qualified biologist experienced with urban building bird-strike design issues to identify measures related to the external appearance of the building to minimize the risk of bird strike; and
- Use a bird-friendly glazing treatment on the façades of any floor within 12 feet of the level from a green roof if the façade has 50 percent or more glazed surface.

4.6.5 SIGNIFICANCE CRITERIA

The following criteria were used to determine the significance of biological resources impacts.

Threshold BIO-1: The Baylands Specific Plan would cause a significant impact if:

- **Any candidate, sensitive, or special-status plant or animal would be killed, removed, or harmed;**
- **Habitat for any special-status plant or animal would be directly removed; or**
- **A special-status habitat would be indirectly degraded because of increased human encroachment, off-leash pets, debris, and litter, or nighttime lighting that causes a decrease in habitat area or quality.**

Threshold BIO-2: The Baylands Specific Plan would cause a significant impact if it would result in the net loss of existing wetland or non-wetland waters acreage, functions, or values.

Threshold BIO-3: The Baylands Specific Plan would cause a significant impact if it would substantially inhibit the movement of any native resident or migratory fish or wildlife species or would impede the use of native wildlife nursery sites.

Threshold BIO-4: The Baylands Specific Plan would cause a significant impact if it would severely trim or result in the loss of protected trees protected by Brisbane Municipal Code Chapter 12.12, Private Tree Regulations, and City administrative regulations.

Threshold BIO-5: The Baylands Specific Plan would cause a significant impact if it would hinder implementation of the San Bruno Mountain Habitat Conservation Plan.

4.6.6 IMPACTS AND MITIGATION MEASURES

a. Impact BIO-1: Special Status Plants, Animals, and Habitats

Methodology for Determining Significance

Building on environmental baseline conditions documented in the Brisbane Baylands Final Program EIR, a subsequent habitat assessment was undertaken by Metis in 2023 documenting existing conditions within the Baylands over a period of several years. Surveys conducted by Biohabitats between 2020 and 2022, including habitat assessments, biological resource plans, and a USACE-approved wetland delineation for the Baylands, were reviewed and independently verified by Environmental Science Associates (ESA), which prepared a Biological Resources Technical Report for the City of Brisbane.

To determine current baseline conditions within the Specific Plan area, and in advance of site reconnaissance surveys, ESA completed 2023 database searches of the CNDDB, the CNPS Electronic Inventory, and the USFWS species list to inform the likelihood of special-status species presence (CDFW 2023; CNPS 2023; USFWS 2023); and reviewed aerial photographs of the Specific Plan area.

The analysis of impacts on special-status plants, animals, and habitats evaluates the physical environmental changes that would result from implementation of the Baylands Specific Plan in the context of the existing site conditions and applicable regulations. The impact analysis considers the impacts on sensitive species potentially present within the Specific Plan area based on the findings of the resource review, references, and data collection described above. The analysis recognizes that impacts on biological resources may vary in duration (i.e., temporary, short term, or long term).

The analysis is focused on impacts that implementation of the Specific Plan would have on sensitive biological resources that have a potential to be present on-site including, but not limited to, federally endangered butterflies that may occasionally use habitat on Icehouse Hill, fish or marine mammals that may be present in the lagoon, nesting birds protected by the Migratory Bird Treaty Act, and bats protected under the California Fish and Game Code. The analysis also responds to previously submitted wildlife agency concerns and comments as part of the 2015 Brisbane Baylands Final Program EIR, as well as the City's environmental requirements.

Because site grading would occur over the entirety of the former landfill and former railyard areas, evaluation of construction impacts in those areas assumes removal of all vegetation and features. Where restoration programs are provided by the Specific Plan, the biological resources analysis compares the extent and quality of existing habitat to that provided by the Specific Plan. Should the extent and quality of habitat provided for by the Specific Plan be equal to or greater than existing conditions, impacts are identified as being less than significant.

In relation to development of trails, recreational improvements, and habitat restoration proposed for Icehouse Hill, impacts were determined to be significant if such activities would directly remove or indirectly damage larval host plants for sensitive butterfly species regardless of whether sensitive butterfly species are actually present within Icehouse Hill.

Nesting birds protected by the Migratory Bird Treaty Act and California Fish and Game Code may be seasonally present through much of the Baylands site. Bat roosting habitat, also protected by Fish and Game Code, is intermittently present on the site. The potential to harm active bird nests or bat roosts during construction activities, including grading and vegetation removal, or while moving vehicles and equipment, was determined to be a significant impact.

Because plants and animals are typically attuned to the 24-hour seasonal cycle of light and dark, artificial nighttime lighting within habitat areas can disrupt mating behaviors, sleep, and predation. To determine whether a significant impact would result, analysis of the potential for light trespass from the Specific Plan's residential, commercial, and other development into habitat areas is analyzed. If the Specific Plan would permit nighttime lighting to extend beyond development areas specifically intended to be lighted into habitat conservation areas. Should nighttime lighting exceed the thresholds set forth for Impact AES-4, Nighttime Lighting, a significant impact would result.

Impact Assessment

Specific Plan-related construction activities would affect some special-status species. Through compliance with existing city codes, operation of Baylands residential, commercial, and recreational uses could also affect special-status or common species, via human encroachment, off-leash pets, and the generation of debris and litter. Section 8.16.060 of the Brisbane Municipal Code requires that, "The owner or person in control of any private property shall at all times maintain the premises free of litter; provided, however, that this section shall not prohibit the

storage of litter in authorized private receptacles for collection." Therefore, the Specific Plan area is expected to be kept free of litter (or debris) that could potentially adversely affect biological resources, whether considered sensitive or common. Impacts of trails proposed to be constructed and maintained within Visitacion Creek and Lagoon Park are addressed in the analysis of Threshold BIO-2, which discusses freshwater habitat, tidally influenced habitats, and waters of the U.S and waters of the state.

The following addresses the physical environmental effects the Baylands Specific Plan would have on those special status species with the potential to occur within the Specific Plan area (i.e., not identified as "absent" in **Table 4.6-2**, *Special-Status Species with the Potential to Occur within the Specific Plan Area*).

Special-Status Plants

Due to historical land uses within the Specific Plan area, and in particular the importation of fill materials and past industrial uses, most of the site does not provide potential habitat for special-status plant species. Icehouse Hill is the only undisturbed portion of the site with native soils that potentially support rare plants. While Icehouse Hill would be retained as open space for passive recreational use following site development, recreational trails constructed there would traverse annual grassland and coastal scrub habitats that may support four special-status plant species. The western edge of Icehouse Hill provides suitable habitat for four CNPS Range 1B.2 species: bent-flowered fiddleneck, San Francisco collinsia, Choris's popcorn flower, and San Francisco campion. Bent-flowered fiddleneck occurs in a variety of habitats, including valley and foothill grassland and coastal scrub. It is known from San Bruno Mountain and may occur in coastal scrub or grassland habitat on Icehouse Hill. San Francisco collinsia is an herbaceous annual that favors coastal scrub and moist, shady woodlands with serpentine soils. Known to occur on Bayview Hill, approximately 0.5 mile north of the Specific Plan area, and also on San Bruno Mountain southwest of the site, potential habitat is available within coastal scrub habitat on Icehouse Hill. Choris's popcorn flower is an herbaceous annual found in moist, grassy areas in coastal scrub and chaparral. Habitat is present in scrub communities on Icehouse Hill. Finally, San Francisco campion is a perennial species that prefers sandy or rocky soils within grassland and scrub communities. Known from fewer than 20 occurrences, this species is known from San Bruno Mountain and may occur on Icehouse Hill. While potential habitat is present for these species at Icehouse Hill, their presence or absence has not been confirmed through focused surveys.

If special-status plants are present within the recreational improvement areas on Icehouse Hill, individual plants or plant populations would be directly lost during the construction of trails and recreational amenities including educational areas, and relocation of the Mission Blue Nursery (discussed below). If present within work areas, rare plants on Icehouse Hill would also be indirectly impacted during operations due to increased post-construction recreation-related activities and equestrian uses.

Fish

As a component of site restoration activities, aquatic and marsh habitat along the northern shoreline of the Brisbane Lagoon would be removed by the proposed realignment of Lagoon Road and development of Lagoon Park, including grading, shoreline habitat restoration, and development of recreational amenities. Installation of shoreline features, as described in Section 3.3.2, *Baylands Specific Plan and Proposed Development*, including **Figure 3-19** through **Figure 3-21b**, in Draft EIR Chapter 3, *Project Description*, would result in increased turbidity in lagoon water during removal of existing habitat, grading and construction, and habitat restoration.

Visitacion Creek, originally part of the open Bay waters, was transformed into an engineered channel between 1946 and 1956 to facilitate drainage across the filled sections of the former Brisbane Landfill within the Baylands (see **Figure 3-4** and **Figure 3-5** in Draft EIR Chapter 3, *Project Description*). The creek exists upon and is surrounded by introduced municipal waste and fill materials. As an enhancement action, fill materials within the lower tidally influenced portion of Visitacion Creek would be removed and the area would be restored as described in Section 3.3.2, *Baylands Specific Plan and Proposed Development*, including **Figure 3-22**, in Draft EIR Chapter 3, *Project Description*. Fish within Visitacion Creek would be temporarily displaced during the removal of fill materials, grading and construction, and habitat restoration.

While San Francisco Bay and attached waters, including the Brisbane Lagoon and Visitacion Creek, are identified as National Oceanographic and Atmospheric Administration (NOAA) essential fish habitat for Pacific salmon species (e.g., chinook salmon) (NOAA Fisheries, no date), the Biological Resources Technical Report determined that on-site waters provide poor habitat for special-status fish species with a low or moderate potential to occur within the Baylands, including Chinook salmon, steelhead trout, green sturgeon, and longfin smelt, with no spawning or rearing habitat on-site or in Brisbane Lagoon. Stray individuals of listed fish species may, however, be present in the Lagoon during migration. Foraging individuals would be able to move away from construction disturbance and would be nominally affected by the energetic expense of avoiding work areas in the lagoon area during construction. Further, no critical habitat for any listed species was documented within the Baylands.

Invertebrates

As noted in Section 4.6.3, *Physical Environmental Setting*, Icehouse Hill is the only area within the Baylands that provides potential habitat for listed butterfly species. In addition, the large marble butterfly may occur in association with weedy mustard species found on and near Icehouse Hill, and throughout the Specific Plan area in areas subject to historic disturbance and degradation. Although not identified on Icehouse Hill during Coast Ridge Ecology surveys, host plants were identified for the Bay checkerspot and Callippe silverspot. Because Icehouse Hill is within the latter butterfly's 0.75-mile flight range from habitat on San Bruno Mountain, the species may be

present or may colonize the site at a later time. Host plants for the Mission blue butterfly and San Bruno elfin butterfly were not identified and these species are not expected on-site.

Ground disturbance associated the construction of trails and recreational facilities within butterfly host and nectar plant areas on Icehouse Hill (**Figure 4.6-3**) could result in the direct removal or indirect adverse effects on Callippe silverspot or Bay checkerspot or their host plants. As an example, the Illustrative Concept Diagram for Icehouse Hill (Specific Plan Figure 5.3.37; **Figure 3-24** in Draft EIR Chapter 3, *Project Description*) proposes a trail leading to an overlook that traverses through grasslands containing the Callippe silverspot host plant, and may also require a permit from the USFWS if a listed butterfly species is present.

Trails placed along the boundaries of, but not within, the grassland areas that support host plants would avoid adverse effects and would also allow trail users a view of the butterflies and/or their habitat with minimal impact. Trails could also be placed through shrublands currently dominated by French broom, a non-native invasive species. Once the French broom is cleared, restoration of native plants could provide trail users with opportunities to view butterflies, assuming that enough habitat can be restored, enhanced, and/or created that would provide sufficient habitat to attract and support the butterfly species (see **Figure 4.6-3**).

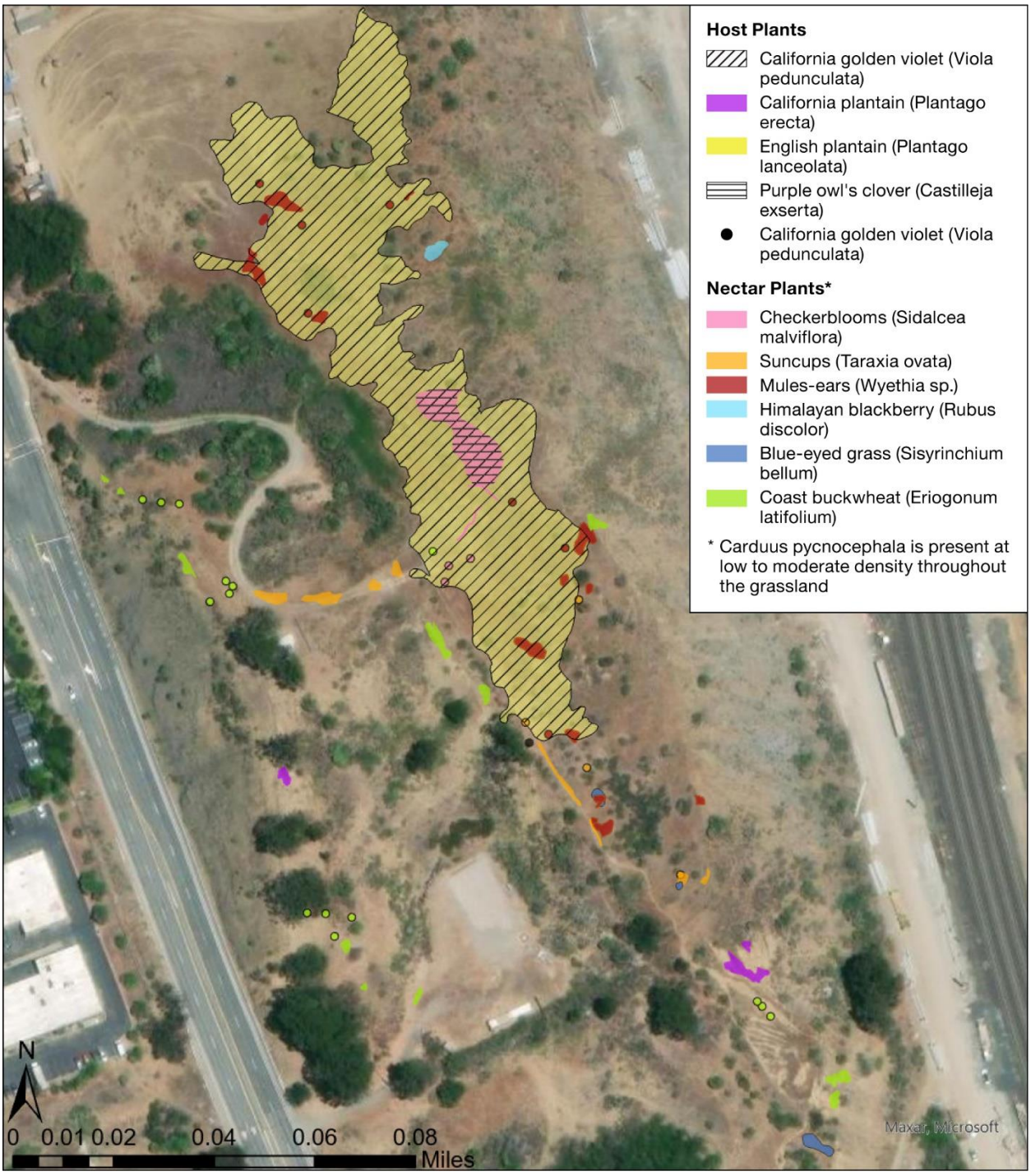
In addition to trails and recreational improvements within Icehouse Hill, the Specific Plan proposes removal and management of invasive species along with planting of native butterfly host species to increase butterfly habitat extent and quality. Such activities are intended to enhance existing habitat within Icehouse Hill but will result in short-term impacts to grassland habitat.

Special-Status Birds

Ridgway's rail (*Rallus obsoletus obsoletus*). Protocol-level surveys for the Ridgway's rail were conducted at Brisbane Lagoon in February to March 2020 (Edelstein 2020) and the species was not found within the Baylands. In addition, a reconnaissance survey in February 2023 found the tidal marsh habitat too small, disturbed, and fragmentary to support this species (ESA 2023).

Burrowing owl (*Athene cunicularia*). Recent reconnaissance surveys did not observe suitable habitat for this species; grasses and vegetation were too long for owl vantage, and open areas were prone to human and vehicle disturbance. Nesting or resident owls are not expected in or near the Specific Plan area; however, burrowing owls are expected to occasionally transit the site and may be present in a non-nesting capacity.

Figure 4.6-3: Existing Butterfly Host and Nectar Plants at Icehouse Hill



SOURCE Coast Ridge Ecology, 2023

Nesting Birds

Common birds protected by the Migratory Bird Treaty Act, including all native bird species that may be present at the Baylands, are at risk of direct and indirect impacts during site construction activities, such as grading, vegetation removal, and vehicle traffic near active nests. Nesting migratory birds may use woodland, marsh, and grassland habitats for nesting in trees, shrubs, or tall grasses, including ornamental vegetation. Within the Baylands, the only special-status bird with a moderate or higher potential to occur is the Alameda song sparrow, a California Species of Special Concern; however, as previously mentioned, the Migratory Bird Treaty Act protects most resident bird species at the Baylands.

Nesting birds may be injured or killed if trees or shrubs are removed during nesting season, or may abandon nests with eggs or young, if noise and human disturbance occur in close proximity. For nesting birds, the CDFW generally recommends a 250-foot construction exclusion zone around the nests of active passerine songbirds during the breeding season and a 500-foot buffer for nesting raptors.[133] The general raptor and passerine bird nesting period cited by the CDFW is from February 1 to August 31. Thus, removal or disturbance to trees and shrubs (i.e., tree removal, tree trimming) occurring between February 1 and August 31 has the potential to injure or kill nesting birds.

Amphibians and Reptiles

No special-status amphibians or reptiles are expected within or near the Specific Plan area.

Mammals

Special-status bats (Townsend's big-eared bat and the hoary bat) are the only identified special-status terrestrial mammals expected to occur on-site.[134] Bats may roost in large trees or in disused buildings and may be injured or killed during demolition and deconstruction of on-site buildings or during vegetation removal.

Marine mammal species are not expected within or near the Specific Plan area.

[133] These buffer distances are considered initial starting distances once a nest has been identified and are commonly revised downward to as low as 25 to 50 feet and 250 feet, based on site conditions and the nature of the work being performed. For example, distances are often reduced if obstacles such as buildings or trees obscure the construction area from active bird nests, or existing disturbances create an ambient background disturbance similar to the proposed disturbance.

[134] As indicated by **Table 4.6-2**, these bat species are identified by the Western Bat Working Group as high priority (species that are imperiled or at a high risk of imperilment) or medium priority (species that warrant a closer evaluation due to potential imperilment) or are identified as a California Species of Special Concern.

Ongoing Impacts from Specific Plan Operations

Human Encroachment

Presuming that new residents will comply with local ordinances pertaining to off-leash pets and littering, operational impacts of Baylands residential, commercial, and recreational purposes would not damage or result in loss of special-status or common species via human encroachment, off-leash pets, and debris and litter. Section 8.16.060 of the City of Brisbane's Municipal Code requires that, "The owner or person in control of any private property shall at all times maintain the premises free of litter; provided, however, that this section shall not prohibit the storage of litter in authorized private receptacles for collection." Therefore, the Specific Plan area is expected to be kept free of litter (or debris) that would adversely affect biological resources, whether considered sensitive or common. Impacts of trails proposed to be constructed and maintained within Visitacion Creek and Lagoon Park are addressed in the analysis of Threshold BIO-2, which discusses Freshwater Habitat, Tidally Influenced Habitats, and waters of the United States and the state.

Specific Plan provisions to control visitor access and prevent pet disturbance to sensitive species or habitat (Sections 5.4.3 and 5.4.4) would be applied to provide specific standards for implementation of habitat buffers and/or physical barriers from sensitive habitat areas. Although the improvement plans contained in the Baylands Specific Plan are illustrative, the final design will exclude humans and their pets from sensitive habitats, such as mitigation areas, butterfly habitat, riparian and aquatic areas, and/or sensitive natural communities. With exclusion of the public from the above-defined sensitive areas through the use of though buffers, barriers, and/or signage, human encroachment will have a less-than-significant impact or no impact.

Nighttime Lighting

Because native animals are typically attuned to the 24-hour seasonal cycle of light and dark. Mating behaviors, sleep, and predation are all determined by the length of nighttime darkness. Introducing artificial nighttime lighting into habitat areas can disrupt these activities. Artificial nighttime lighting can disrupt an animal's movements. Owls and bats, for example, can lose the advantage of specialized night vision that enables them to hunt without being seen. Nighttime lighting can also favor other predators, as the nocturnal animals that are their prey lose the cover of darkness to hide.

As noted above, the Specific Plan incorporates performance standards from Threshold AES-4 as requirements for Baylands development and explicitly incorporates Program EIR Mitigation Measure 4.A-4a. Nighttime lighting would therefore be directed downward, and light trespass into habitat areas would not exceed the brightness of a full moon.

Offsite Lands

The relocation site for Fire Station No. 81, the existing Bayshore School, and the Martin Substation have been fully urbanized. In addition, construction of offsite utility lines would occur within fully urbanized rights-of-way (utility connections to the Martin Substation) or underneath existing streets (potable and recycled water lines). Thus, offsite improvements would not affect sensitive biological resources.

Significance Conclusion for Impact BIO-1

The Specific Plan acknowledged that development would occur in or adjacent to habitats where special-status plant and wildlife species may be encountered. Significance conclusions are provided below for special-status species that may be encountered on-site.

Rare Plants. Special-status plants are assumed to occur in areas with suitable conditions on Icehouse Hill. The construction of trails on Icehouse Hill and an anticipated post-construction increase in recreation-related activities including equestrian uses would result in a significant impact.

Butterflies. The construction of trails and recreational facilities at Icehouse Hill and planned management activities in this area have the potential to cause direct or indirect adverse effects on Callippe silverspot butterfly or Bay checkerspot butterfly host plants, a significant impact requiring mitigation.

Project activities, including general site clearing and grubbing in preparation for construction, have the potential to encounter large marble butterfly adults or larvae on weedy mustard plants that grow sporadically throughout the Specific Plan area. The butterfly does not have protected status. If the recent petition to federally list the large marble butterfly is adopted, a significant impact would result.

Nesting Birds. Grading or ground disturbance activities associated with site development have the potential to encounter protected nesting birds, including raptors, passerines, and other birds, particularly between February 1 to August 31. Construction activities within the Specific Plan area have the potential to impact nesting birds, which constitutes a significant impact requiring mitigation. Night lighting would not exceed the performance standards established in Section 4.5, *Aesthetic and Visual Resources*, and therefore would not have a significant direct or indirect impact on wildlife resources.

Mammals. Sensitive bats may be encountered during the demolition and deconstruction of on-site buildings or during tree and vegetation removal, particularly during the maternity season (February 15 to October 15) and winter hibernacula season (August 15 to April 15). The injury of sensitive bats or destruction of active maternity roosts would constitute a significant impact.

Program EIR Mitigation Measures

MM BIO-1a: Special-Status Plant Surveys at Icehouse Hill (Program EIR Mitigation Measure 4.C-1a). Prior to construction, or any other Baylands development-related ground disturbance activities on Icehouse Hill, the applicant shall conduct pre-construction presence/absence surveys for special-status plants.

Initial surveys at Icehouse Hill shall be carried out in conjunction with surveys for endangered butterfly host plants described in EIR Appendix D, *Biological Resources Technical Report*. Surveys would be implemented to determine if a special-status plant species has colonized the site in the interim between the determination of baseline conditions for this EIR and project initiation, as well as to provide site-specific direction for final trail routing and design to avoid sensitive plant species (see MM BIO-1b, Special-Status Plant Avoidance at Icehouse Hill, and MM BIO-1c, Rare Butterfly Surveys and Habitat Protection at Icehouse Hill.

Surveys shall be conducted in accordance with CNPS and CDFW rare plant survey guidelines and shall be conducted during the flowering period when each species is most readily identifiable.

In order to capture variability of special-status plant species distribution, three special-status plant surveys shall be conducted at two-week intervals during the appropriate flowering period (April to June), before commencement of any development activities on Icehouse Hill.

Any special-status plant populations shall be mapped in the field. If the presence of any special-status plant species is confirmed, a copy of the survey results shall be forwarded to the CDFW, and MM BIO-1b shall be implemented.

Whether or not special-status plants are identified during surveys, the additional mitigation identified in MM BIO-1c, Rare Butterfly Surveys and Habitat Protection at Icehouse Hill, shall be implemented to avoid special-status plants and butterfly host plants.

MM BIO-1b: Special-Status Plant Avoidance at Icehouse Hill (Program EIR Mitigation Measure 4.C-1b). Documented plant occurrences on Icehouse Hill shall be avoided by establishing a buffer zone of no less than 25 feet prior to Specific Plan trail construction, or other ground-disturbing activities having the potential to disturb or result in mortality of special-status plant populations. This buffer zone, whose specific width shall be determined based on site-specific analysis of proposed construction techniques and their potential for dust creation, shall be demarcated using flagging, orange fencing, or any other visual barrier between

plant populations and the active disturbance footprint. Buffer distances may be increased if hydrology features would be altered as a result of trail construction.

If the City determines that disturbance or mortality is unavoidable, special-status plants shall be restored onsite in either the annual grassland or coastal scrub habitat located on Icehouse Hill. Restoration would be at a 1:1 ratio consistent with typical CDFW requirements in areas that are to remain as post-development open space, as is Icehouse Hill. The 1:1 replacement ratio shall be met at the end of five years and may therefore require initial plantings at a greater than 1:1 ratio, as determined by a qualified botanist. If feasible, special-status plants and/or seeds shall be salvaged from on-site plants and used for any replacement plantings.

To reduce impacts from off-trail use, and increased horse use, trail head signage shall be required to educate the public regarding sensitive resources and restoration that would be affected by off-trail use. Mitigation areas shall be fenced or marked for three years. Trail use rules shall be developed prior to construction, and in addition to limiting use to identified trails, may include other requirements to limit the possibility that sensitive species would be impacted.

To avoid indirect impacts to special status plant species that could occur if slope drainage or surface hydrology is modified as a result of trail construction Mitigation Measure 4.C1-g shall also be applied.

Prior to issuance of project approvals, and in coordination with state and federal permitting requirements, a five-year restoration mitigation and monitoring program shall be developed and implemented for any planting areas established to mitigate impacts to special-status species plants. Restoration success criteria shall include:

1) Establishment of mitigation site(s) at or near the location of impacts where plant restoration will occur.
2) A qualified botanist shall identify an appropriate plant palette and restoration methodology compatible with the specific impacted special status species. Mitigation sites could include existing annual grassland or coastal scrub habitat areas on Icehouse Hill, depending on site conditions and locations of special-status plants found.
3) No loss in total number of individual plants in a special status plant population found on Project Site shall be verified at the end of the five-year monitoring period established in coordination with state and federal agencies with jurisdiction over these resources.

MM BIO-1c: Rare Butterfly Surveys and Habitat Protection at Icehouse Hill (Program EIR Mitigation Measure 4.C-1c). Prior to any trail-related construction, vegetation management, development, or any other ground disturbing activities taking place on Icehouse Hill, pre-construction surveys for butterfly larval host plants (*Viola pedunculata*, *Lupinus albifrons*, *L. formosus*, and *L. versicolor*) shall be conducted by a qualified invertebrate biologist with demonstrated experience working with the species to ensure avoidance of such host plants. Required surveys may be conducted in conjunction with the rare plant surveys required under MM BIO-1a, Special-Status Plant Surveys at Icehouse Hill. The timing for these preconstruction surveys is further specified below.

All populations of butterfly host plants located on Icehouse Hill shall be mapped and trails shall be designed to avoid them, whether or not they are being used by butterflies at the time of the initial surveys.

All populations of butterfly host plants located on Icehouse Hill shall be inspected by a qualified invertebrate biologist, at an appropriate time of year, to determine whether or not they are being used by endangered butterflies for reproduction. If it is determined that they are being used for reproductive purposes by endangered butterflies, the specific project applicant shall contact the USFWS to identify the appropriate consultation process prior to proceeding further with any activities on Icehouse Hill. Consultation may indicate that an Incidental Take Permit is required pursuant to the FESA.

If populations of Callippe silverspot or Mission blue butterflies are determined to be reproducing on Icehouse Hill, the property owner shall prepare and implement a Butterfly Protection Plan in coordination with the USFWS and the habitat managers for the San Bruno Mountain Habitat Conservation Plan prior to any ground-disturbing activities on or adjacent to Icehouse Hill. The plan shall include, but not be limited to, the following elements:

i. Pre-construction surveys shall be conducted during the period of identification for larval host plants and butterfly larvae in the flowering and/or breeding season immediately prior to trail construction or any other work scheduled to occur on Icehouse Hill.

ii. Trail construction on Icehouse Hill shall avoid populations of larval butterfly host plants.

iii. All trails, or alternately, sensitive habitats, shall be fenced to minimize the establishment of "informal" trails through habitats supporting special-status plants.

iv. Dogs shall be allowed on Icehouse Hill trails on leash only.

v. Interpretative signage shall be posted at trailheads explaining the presence of endangered butterflies and/or their habitat and the importance of preserving Icehouse Hill as habitat for endangered species.

Grassland habitat on Icehouse Hill shall be restored and enhanced to maintain and expand healthy populations of butterfly host plants according to the following performance standards:

- No net loss of existing butterfly host plants or damage to existing butterfly habitat or host plants from the trail and other recreational improvements, with habitat monitoring provided in years 1, 3, and 5.
- Reintroduced nectar and host plants for the Callippe silverspot, Bay checkerspot, and Mission blue butterflies achieve 50 percent cover in designated Habitat Management Areas within five years.
- Non-native invasive species such as French broom and fennel shall kept to a minimum within management areas.

MM BIO-1d: Nesting Bird Protection (Program EIR Mitigation Measure 4.C-1d). The following steps shall be taken to avoid direct losses of nests, eggs, and nestlings and indirect impacts to common and special status avian species.

Vegetation removal including removal of trees and shrubs as part of site development shall be confined to the nonbreeding season, except as provided for below. Grading or ground disturbance activities associated with site development including site remediation activities shall occur after pre-construction protocol burrowing owl surveys are conducted as described below and in the 2012 CDFW Staff Report on Burrowing Owls.

- If removal of trees and shrubs or disturbance to trees and shrubs (i.e., tree removal, tree trimming) or grading is proposed to occur **between** January 1 and September 15, a qualified avian biologist shall survey any habitat proposed to be modified during the nesting season (i.e., January 1 through September 15) to determine if active bird nests are present. Surveys shall occur not more than 14 days prior to tree removal or trimming. Surveys shall include all trees in line-of-sight and within 500 feet of construction for raptors, and all vegetation (including bare ground within 250 feet) for all other species. If active nests are found, tree removal and/or tree trimming shall be conducted only after the young have left the nest and the nest is no longer in use. Confirmation that the nest is no longer in use shall be provided by a qualified biologist familiar with the species.

If the qualified avian biologist identifies active nests, a no disturbance buffer of 150 feet shall be established and monitored by a qualified avian biologist, with authority to stop work in the event construction activities encroach within the disturbance buffer thus ensuring that impacts to nesting birds would not occur.

Survey and monitoring reports shall be submitted to City staff for review: preconstruction survey reports shall be submitted prior to initiating construction activities; monitoring reports shall be submitted weekly until activities associated with nest habitat removal or disturbance activities are completed.

- At all times of year, prior to initiating grading or ground disturbance activities associated with remediation activities required prior to site development, the following shall occur:
  - Not less than 45 days prior to site grading, a qualified biologist shall survey the site to determine the presence of active burrowing owl nests. If active nests are found, passive relocation of the individuals would be accomplished according to the CDFW standards in effect at the time of the survey including the 2012 CDFW Staff Report on Burrowing Owls.
  - Results of the burrowing owl survey will be forwarded to CDFW.
  - Should the results of the survey include positive findings for occupied burrows, the location and condition of the burrows shall be reported to the CDFW, and an on-site mitigation plan shall be prepared for review and approval by the CDFW. Onsite mitigation shall include construction of artificial burrows at a ratio of not less than 1:1 with the burrows located away from areas permitted for use by dogs and hikers. Following construction of the artificial burrows, the existing owls shall be passively removed from their burrows using one-way trap doors. The artificial burrows shall be monitored for a period of five years to confirm occupation by the species. Monitoring reports shall be forwarded to the CDFW to document compliance with this mitigation measure.

MM BIO-1e: Special-Status Bat Roost Protection (Program EIR Mitigation Measure 4.C-4g). Applicants for demolition, grading or site-specific development projects pursuant to an approved specific plan within the Baylands shall take the

following measures to avoid direct mortality of roosting special-status bats and disturbance of maternity roosts or winter hibernacula:

- A bat biologist familiar with Bay Area species shall conduct surveys of all potential bat habitat, including areas suitable for maternity roosts and/or winter hibernacula within a site proposed for development prior to initiation of construction activities, including initial grading. Surveys shall be conducted within one year prior to construction to capture current bat habitats at the site, as presence of bats could vary yearly, and survey results several years before impacts occur could be inaccurate. Potentially suitable habitat shall be located visually. Bat emergence counts shall be made at dusk as the bats depart from any suitable habitat. In addition, an acoustic detector shall be used to determine any areas of bat activity. At least four nighttime emergence counts shall be undertaken on nights that are warm enough for bats to be active, or as otherwise deemed adequate by a qualified bat biologist to determine species absence. The bat biologist shall determine the type of each active roost (i.e., maternity, winter hibernacula, day, or night).
- Removal or trimming of trees or demolition of buildings showing evidence of bat activity shall occur during the period least likely to affect the bats as determined by a qualified bat biologist (generally between February 15 and October 15 for maternity roosts and between August 15 and April 15 for winter hibernacula). If active day or night (non-maternity) roosts are found, the bat biologist shall take action to allow individual bats to depart prior to tree removal or building demolition.
- The following steps shall be taken during the removal of active or suspected bat roosts:

    1. The qualified biologist shall be present during tree and structure disturbance or removal if active non-maternity or hibernation bat roosts or potential roosting habitat are present. Trees and structures with active non-maternity or hibernation roosts or potential habitat shall be disturbed or removed only under clear weather conditions when precipitation is not forecast for three days and when nighttime temperatures are at least 50°F, and when wind speeds are less than 15 mph.

2. Trimming or removal of trees with active (non-maternity or hibernation) or potentially active roost sites shall follow a two-step removal process:
    a. On the first day of tree removal and under supervision of the qualified biologist, branches and limbs not containing cavities or fissures in which bats could roost, shall be cut only using hand tools (e.g., chainsaws).
    b. On the following day and under the supervision of a qualified biologist, the remainder of the tree may be removed, either using hand tools or other equipment (e.g., excavator or backhoe).
3. All felled trees shall remain on the ground for at least 24 hours prior to chipping, off-site removal, or other processing to allow any bats to escape, or be inspected once felled by the qualified biologist to ensure no bats remain within the tree and/or branches.
4. Disturbance to or removal of structures containing or suspected to contain active bat roosts (non-maternity or hibernation) or potentially active bat roosts shall be done in the evening and after bats have emerged from the roost to forage. Structures shall be partially dismantled to significantly change the roost conditions, causing bats to abandon and not return to the roost. Removal will be completed the subsequent day.
5. During construction, a no-disturbance buffer shall be created around active bat roosts being used for maternity or hibernation purposes at a distance to be determined in coordination with the CDFW.

Significance Conclusion for Impact BIO-1 with Implementation of Mitigation Measures Carried over from the Program EIR

The Program EIR identified Mitigation Measures MM BIO-1a and MM BIO-1b (Program EIR Mitigation Measures 4.C-1a and 4.C-1b) to reduce impacts on special-status plants by requiring surveys, rare plant mapping, and avoidance of rare plants, when possible. However, these measures did not provide explicit performance standards for special-status plant restoration areas.

The Program EIR identified Mitigation Measure MM BIO-1c (Program EIR Mitigation Measure 4.C-1c) to identify, avoid, and protect rare butterflies and their habitat at Icehouse Hill but also did not provide explicit performance standards related to long-term butterfly habitat management.

Presently, the large marble butterfly has no legal protection status and there is no requirement to provide mitigation under CEQA. Project-related disturbances within its preferred habitat of invasive radish and mustards, which grow sporadically throughout the Specific Plan area, would impact this butterfly. This would be a less than significant impact. If the butterfly gains legal protection status under CEQA, CESA, or FESA, prior to Project implementation, a significant impact would result.

To ensure the protection of special-status plants and butterflies, additional mitigation measures are needed.

Additional Mitigation Measures

MM BIO-1f: Performance Standards for Special-Status Plant Mitigation at Icehouse Hill. If direct or indirect impacts to special-status plants are unavoidable, rare plant populations shall be restored on-site in either the annual grassland or coastal scrub habitat on Icehouse Hill. Restoration would be at a 1:1 ratio based on the number of affected plants and/or acreage of the plant population, whichever is deemed most appropriate by a qualified botanist in coordination with the city. The 1:1 replacement ratio shall be met at the end of 5 years and may therefore require initial plantings at a greater than 1:1 ratio, as determined by a qualified botanist. Any special-status plants and/or seeds shall be salvaged from on-site plants and used for any replacement plantings.

To reduce impacts from off-trail use, and increased horse use, trail head signage shall be required to educate the public regarding sensitive resources and restoration that would be affected by off-trail use. Mitigation areas shall be fenced or marked for a minimum of 3 years. Trail use rules shall be developed prior to construction, and in addition to limiting use to identified trails, may include other requirements to limit the possibility that rare plants would be impacted.

Prior to City approval of any site-specific development projects that affect special-status plants, a 5-year restoration mitigation and monitoring program shall be developed and implemented for any planting areas established to mitigate impacts to such species. Restoration success criteria shall include:

1. Establishment of mitigation site(s) at or near the location of impacts where plant restoration will occur.
2. A qualified botanist shall identify an appropriate plant palette and restoration methodology compatible with the specific impacted special-status species. Mitigation sites could include existing annual grassland or

coastal scrub habitat areas on Icehouse Hill, depending on site conditions and locations of special-status plants found.

3. Regular maintenance shall be performed twice annually or more frequently as needed to identify and resolve risks to mitigation sites. Site weeding shall be performed as necessary to reduce competition from non-native vegetation.
4. No loss in total number of individual plants in a special-status plant population found on the Baylands shall be verified at the end of the 5-year monitoring period established in coordination with state and federal agencies with jurisdiction over these resources, as applicable. The mitigation plan shall provide contingency measures to restore and manage rare plant populations, including plant salvage, replanting, and continued monitoring and management, if the above standard is not met within 5 years.

MM BIO-1g: Rare Butterfly Surveys and Habitat Protection Performance Standards. The Butterfly Protection Plan identified in Mitigation Measure BIO-1c shall be included in site development plans for Icehouse Hill to be submitted to the City for review and approval prior to City approval of any ground-disturbing activities within Icehouse Hill. The Plan shall include, but not be limited to, the following elements and specific performance standards to minimize impacts to listed butterfly species and their host plants and restored habitat and thereby facilitate reintroduction of listed butterfly species on Icehouse Hill as proposed by the Specific Plan:

i. Trail configurations and any non-pedestrian path uses (i.e., observation areas, educational areas, overlooks, nature play areas, gardens, and relocation of the Mission Blue Nursery), shall be sited to avoid butterfly host and nectar plants, whether or not they are being used by rare butterflies at the time of the pre-construction surveys.

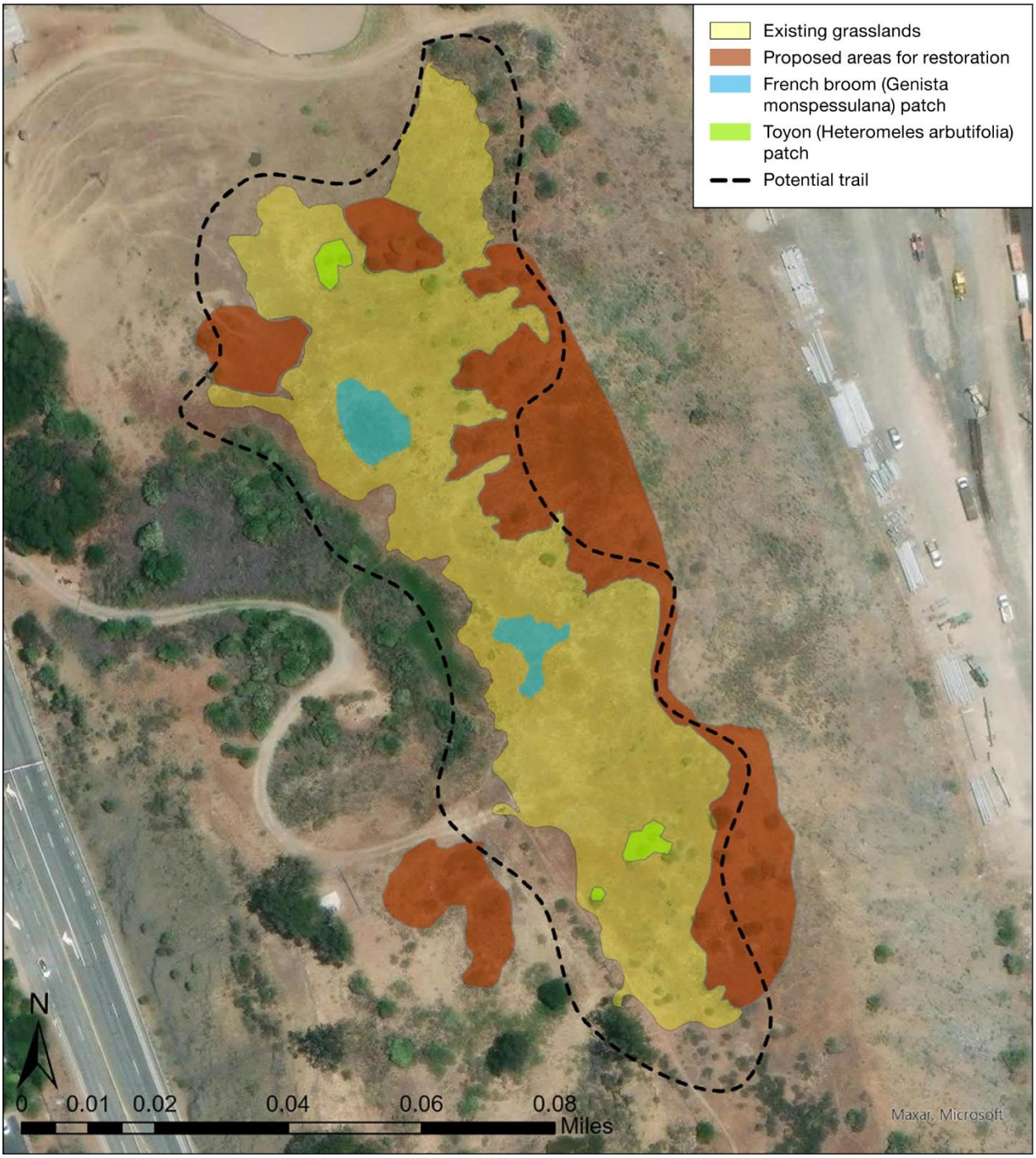
ii. Trail construction may be constructed through butterfly host plant restoration areas as conceptually illustrated in Figure 4.6-4.

iii. Establishment of seasonal restrictions or a period during which horses would be permitted to occur on Icehouse Hill associated with passive recreation areas shall be implemented in a manner that coordinates best with the use pattern of special status butterflies, under consultation with a Lepidopterist.

iv. Identification of habitat management areas for the enhancement/ restoration of quality patches of nectar and host plants to contribute to the survival and/or the reintroduction of listed butterfly species (i.e.,

Callippe silverspot, Bay checkerspot, and Mission blue butterflies) on Icehouse Hill.

Figure 4.6-4: Potential Areas for Butterfly Habitat Restoration at Icehouse Hill



SOURCE: Coast Ridge Ecology, 2023

v. Identification of restoration activities that protect and support the survival of listed butterfly species, including, but not necessarily limited to, the restoration and enhancement of native grassland habitat on Icehouse Hill to maintain and expand healthy populations of butterfly host plants and stabilize soils; development of a scrub encroachment and invasive species management plan; development of a planting palette designed by a qualified botanist using plant species that are known to support special-status butterflies, including Callippe silverspot, Bay checkerspot, and Mission blue butterfly host plants; ensuring that non-native Italian thistle (*Carduus pycnocephalus*) will not be removed from Icehouse Hill until alternate butterfly nectar plant sources have become established; and identification of potential sources of nectar and host propagules or seeds to enhance plant populations.

vi. Identification of operational actions to protect and support the survival of listed butterfly species, including, but not necessarily limited to, the fencing of trails or sensitive habitats and/or the creation of buffer areas to minimize the establishment of "informal" trails through habitats supporting butterfly host or nectar plants; providing signage that dogs shall be allowed on Icehouse Hill trails on leash only; providing interpretative signage posted at trailheads explaining the presence of endangered butterflies and/or their habitat and the importance of preserving Icehouse Hill as habitat for listed butterfly species; and development of a grazing management program, which would include seasonal restrictions on horse grazing on Icehouse Hill to allow grazing only between November and April, or as otherwise determined appropriate by a qualified biologist, and ongoing monitoring and modifications to grazing regimes.

vii. Annual monitoring surveys shall be conducted for 5 years after completion of restoration to assess habitat conditions and determine whether populations of Callippe silverspot, Bay checkerspot, or Mission blue butterflies are present and/or reproducing on Icehouse Hill.

MM BIO-1h: Large Marble Butterfly Surveys and Habitat Protection (Required only if the species gains legal protection status). Focused surveys for the large marble butterfly shall be performed by a qualified biologist during the butterfly flight season (March-June) prior to construction, vegetation management, or other ground disturbing activities. Survey findings shall be coordinated with the U.S. Fish and Wildlife Service. The implementation of Mitigation Measures MM BIO-1c (Rare Butterfly Surveys and Habitat Protection at Icehouse Hill) and MM BIO-1g (Rare Butterfly Surveys and Habitat Protection Performance Standards)

would be applied to mitigate impacts to the large marble butterfly, which would consist of habitat avoidance and native vegetation plantings to support large marble butterfly populations.

Significance Conclusion for Impact BIO-1 with Implementation of All Mitigation Measures

The Baylands Specific Plan area and surrounding areas support habitat for special-status wildlife species and rare plants that would be impacted as part of Specific Plan development. Mitigation Measures MM BIO-1a, MM BIO-1b, and MM BIO-1c ensure that construction of trail and recreational improvements at Icehouse Hill, as well as habitat enhancement and management activities in this area, would survey for and avoid special-status plants, retain existing butterfly habitat, and maintain quality patches of nectar and host plants to support potential populations of Callippe silverspot and Bay checkerspot butterflies. Mitigation Measure MM BIO-1d establishes appropriate surveys for nesting birds, buffer areas around active nests, and time restrictions for construction activities within buffer areas, thereby protecting nesting birds within trees and shrubs during the nesting season. Mitigation Measure MM BIO-1e would avoid direct mortality of roosting special-status bats and disturbance of maternity roosts or winter hibernacula. Mitigation Measures MM BIO-1f and MM BIO-1g provide performance standards for special-status plants and rare butterflies and would reduce impacts to a less-than-significant level. Mitigation Measure BIO-1h would require focused surveys for the large marble butterfly to determine its presence and distribution in the Specific Plan area and avoid and mitigate impacts to this species. These mitigation measures ensure that impacts to special-status plants and wildlife species would be reduced to less than significant.

b. Threshold BIO-2: Freshwater Habitat, Tidally Influenced Habitats, Waters of the United States, Waters of the State, and Areas Subject to the Jurisdiction of the State Lands Commission or Bay Conservation Development Commission

Methodology for Determining Significance

Analysis of the Specific Plan's impacts recognizes that grading activities associated with site remediation, final landfill closure, and creation of development pads for Specific Plan development requires removal of nearly all portions of the site containing wetlands and non-wetland waters. As a result, the analysis focuses on documenting existing conditions within the Baylands and determining whether the habitat restoration plans for Visitacion Creek and Lagoon Park described in the Specific Plan would result in a net loss of wetlands and non-wetland waters in relation to acreage and habitat values and functions. If Specific Plan development would result in a net loss of wetlands or non-wetland waters in relation to acreage and habitat values or functions, the analysis identifies a significant impact along with mitigation measures to be implemented as part of site development.

Impact Assessment

Direct Impacts

Loss of Wetlands and Non-Wetland Waters/Sensitive Natural Communities

Wetlands and non-wetland waters, including open waters (e.g., the Lagoon and Visitacion Creek) within the Specific Plan area would be subject to direct and indirect impacts, principally during grading and construction. Wetlands and riparian habitats are CDFW-regulated sensitive natural communities which are collectively discussed below. The Specific Plan area contains one terrestrial sensitive natural community, California Goldfields-Dwarf Plantain Flower Fields, as identified in Figure 4.6-3, that would be avoided by the Baylands Specific Plan. There would be no direct or indirect impacts to this sensitive natural community.

Visitacion Creek and any surrounding (but limited) jurisdictional habitats would be graded and removed as part of Specific Plan development. The Lagoon would remain in place. Both Visitacion Creek and all other wetland and non-wetland waters that would be removed would ultimately be replaced as part of the Specific Plan's habitat restoration plans for Visitacion Creek, Lagoon Park, and the stormwater detention facility. A majority of the jurisdictional aquatic features that would be impacted and enhanced at Visitacion Creek and the north shore of the Lagoon occur within the footprint of the former Brisbane Landfill.

As shown in **Table 4.6-3**, a total of 16.92 acres of federal and/or state-jurisdictional wetland and non-wetland waters within and along Visitacion Creek and the north shore of Brisbane Lagoon would be removed by implementation of the Baylands Specific Plan, including 14.50 acres of wetlands and 2.42 acres of non-wetland waters. The 14.50 acres of wetlands that would be removed by Specific Plan development include:

- 11.68 acres of palustrine emergent habitat (freshwater marsh; south of Visitacion Creek and within the future Roundhouse/Icehouse Hill Districts)
- 1.09 acres of estuarine emergent habitat (tidal/intertidal marsh; north and south of Visitacion Creek and along the north shore of Brisbane Lagoon)
- 1.73 acres of constructed basin (seasonal wetlands; north and south of Visitacion Creek and within the future Sustainability District)

The 2.42 acres of non-wetland waters that would be removed by Specific Plan development include:

- 1.10 acres of open waters (subtidal non-wetland waters; Visitacion Creek and Brisbane Lagoon)
- 1.06 acres of estuarine rocky shore habitat (tidal/intertidal marsh; northern shore of Brisbane Lagoon)
- 0.26 acres of constructed waterways (seasonal; Visitacion Creek)

Table 4.6-3: Wetland and Non-Wetland Waters along Visitacion Creek to Be Removed

	Classification	Habitat Type/Hydrologic Function	Impacted Area (Acres)
Wetlands			
Wetland	Palustrine Emergent	Freshwater Marsh (1)	11.68
Wetland	Estuarine Emergent	Tidal/Intertidal Marsh (2)	1.09
Wetland	Constructed Basin	Seasonal Wetlands (3)	1.73
	SUBTOTAL WETLANDS		*14.50*
Non-Wetland Waters			
Non-wetland waters	Subtidal Mudflat	Subtidal Mudflat (4)	1.10
Non-wetland waters	Estuarine Rocky Shore	Tidal/Intertidal Marsh (2)	1.06
Non-wetland waters	Constructed Waterway	Seasonal Non-Wetland Waters (5)	0.26
	SUBTOTAL NON-WETLAND WATERS		*2.42*
	TOTAL WETLANDS AND NON-WETLAND WATERS		**16.92**

SOURCE: ESA Associates, *Brisbane Baylands Specific Plan Biological Resources Technical Report*, September 2023; Biohabitats, *Baylands Wetland Delineation Report*, representing the acreages accepted by the verified PJD from July 2021.

NOTE: The parenthetical numbers – (1) through (5) – relate to the hydrologic functions also provided in **Table 4.6-3**.

Proposed Habitat Restoration and Net Effect on Acreage of Wetlands and Non-Wetland Waters within the Specific Plan Area

Table 4.6-4 analyzes the extent to which the habitat restoration proposed in the Specific Plan would provide in-kind replacement of the 16.92 acres of impacted wetlands and non-wetland waters on a 1:1 acreage basis.

Table 4.6-4: Impacted and Restored/Enhanced Wetlands and Non-Wetland Waters

Habitat Type/ Hydrologic Function	Impacted Wetlands and Non-Wetland Waters	Restored/Enhanced Wetland and Non-Wetland Waters					
		Visitacion Creek		North Shore of Brisbane Lagoon (Lagoon Park)		Visitacion Creek + North Shore of Brisbane Lagoon (Lagoon Park)	
		As Initially Installed	Year 2100 +3.1 ft-6.5 ft SLR	As Initially Installed	Year 2100 +3.1-6.5 ft SLR	As Initially Installed	Year 2100 +3.1-6.5 ft SLR
Freshwater Marsh/Seasonal Wetlands and Non-Wetland Waters (1), (3), (5)	13.67	11.38	11.38	3.82	3.82	15.20	15.20
Tidal/Intertidal Marsh (2)	2.15	2.20	2.52–13.01	2.00	8.72–12.72	4.20	11.24–25.73
Subtidal Mudflat (4)	1.10	1.60	3.67–6.24	0.20	1.85–10.76	1.80	5.52–17.00
WETLANDS & NON-WETLAND WATERS TOTAL	***16.92***	***15.18***	***17.57–19.25***	***6.02***	***14.39–23.48***	***21.20***	***31.96–42.73***

SOURCES: ESA, *Sea Level Rise Technical Report*, Figure 5, 2024; Biohabitats, *Wetland Delineation Report*, 2023; *The Baylands Specific Plan*, Chapter 5, 2023

ABBREVIATION: SLR = sea level rise

NOTE: Parenthetical numbers (1) through (5) refer to the hydrologic functions also provided in **Table 4.6-3**.

The total area of wetlands and non-wetland waters that will be lost during Baylands development (16.92 acres) is proposed to be replaced with 21.20 acres of wetlands and non-wetland waters when habitat restoration within Visitacion Creek and Lagoon Park are completed (**Table 4.6-4**). As demonstrated in that table, proposed habitat restoration of Visitacion Creek would fall short of replacement on a 1:1 acreage basis (16.92 acres of impact vs. 15.18 acre of enhancement). However, as described in **Table 4.6-4** and in the Land Use Program in Draft EIR Chapter 3, *Project Description* (Section 3.3.2), additional planned habitat restoration at the Lagoon's north shore would provide in-kind replacement for freshwater marsh, tidal/intertidal marsh and subtidal mudflats.

As shown in **Table 4.6-4**, the effects of 3.1 feet to 6.5 feet of sea level rise through 2100 (Low Risk Aversion scenario) on proposed restoration of Visitacion Creek and Lagoon Park would be to increase the area of each wetland type, expanding the total area of wetlands and non-wetland waters from 21.20 acres when habitat restoration is complete to 31.96 to 42.73 acres in the Year 2100.[135]

Indirect Construction Impacts

Grading and construction in areas with erodible soils such as Visitacion Creek and the north shore of Brisbane Lagoon can lead to soil particles entering drainages, freshwater or intertidal/ tidal marshes, and ultimately Brisbane Lagoon and San Francisco Bay. Sedimentation can degrade aquatic and marsh wildlife habitat by clogging vegetation with sediment. In addition, riparian vegetation along freshwater drainages can be harmed or killed by changes in water quality, which may alter habitat important to marsh wildlife. The analysis of Threshold HWQ-1 (Section 4.14) noted that installation of habitat improvements within Visitacion Creek and along the north side of Brisbane Lagoon would have a heightened potential for erosion due to tidal action and stormwater drainage over exposed soils.

Adherence to required NPDES permits and SWPPPs in combination with certified Program EIR Mitigation Measures 4.H-1a and 4.H-1b would avoid these adverse effects on aquatic and marsh wildlife habitat.

Offsite Lands

The Bayshore Mobility Plan improvements, relocation site for Fire Station No. 81, the existing Bayshore School, and offsite utility lines are within fully urbanized areas or underneath existing streets (potable and recycled water lines). These project components are not located in wetland areas and therefore would have no impact on wetlands and non-wetland waters.

[135] The Year 2100 High Emissions/Low Risk Aversion scenario of 3.1 and 6.5 feet of sea level rise is consistent with the 2018 State of California sea level rise guidance developed by the Ocean Protection Council, which identifies 3.1 feet of sea level rise as the appropriate criterion for protection of habitat areas and other open space types.

Human Encroachment within Wetlands and Non-Wetlands Waters

Proposed trails within Visitacion Creek and Lagoon Park are proposed to be designed to limit recreational access and thereby the intensity or duration of human encroachment that could lead to a decline in the quality of habitat areas. To control disturbance to the lagoon marsh complex by visitors and/or pets, the Specific Plan provides for an adjacent upland area to serve as a habitat buffer between Lagoon Road and development areas to the north and wetland habitats along the north side of the lagoon (see **Figure 3-20**). However, as shown in **Figure 3-19**, a series of trails are proposed running through wetland areas south of the buffer area. The Specific Plan further provides for physical barriers, such as cyclone fencing or equivalent screening, to be maintained along with educational signage. Specific Plan Section 5.4.3 states that barriers, should they be provided, would be at least 3 feet high with native vegetation planted on either side to keep dogs, cats, other household pets, and visitors out of water-related (or biologically sensitive) habitats. Trails within the wetland portions of Lagoon Park and Visitacion Creek provided on raised platforms such as the illustrative examples provided in Specific Plan Figures 5.3.24 and 5.3.32 (**Figure 4.6-5** and **Figure 4.6-6**, below) would have minimal effects on habitat areas along the north shore of the lagoon.

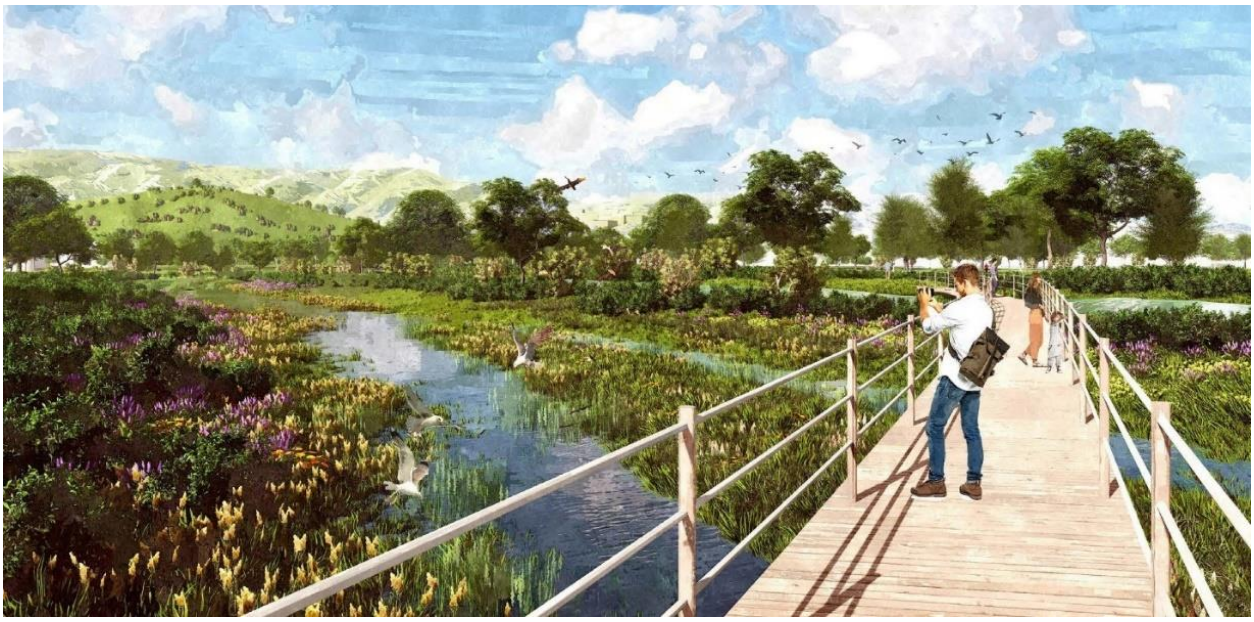
Figure 4.6-5: Illustrative Examples of Trails within Lagoon Park (Specific Plan Figure 5.3.24)

Multi-Use Path

Grassland Walk

Trails within Visitacion Creek would be provided on raised platforms such as the illustrative example provided in Specific Plan Figure 5.3.32 (**Figure 4.6-6**, below). This design would avoid adverse effects on habitat areas along the creek due to human/pet interference Section 8.16.060 of the Brisbane Municipal Code requires that "The owner or person in control of any private property shall at all times maintain the premises free of litter; provided, however, that this section shall not prohibit the storage of litter in authorized private receptacles for collection." Therefore, the Specific Plan area would be kept free of litter (or debris); avoiding that could potentially have adverse effects on regulated biological resources.

Figure 4.6-6: Illustrative Example of Trails within Visitacion Creek (Specific Plan Figure 5.3.32)



Visitacion Creek – Looking West

Significance Conclusion for Impact BIO-2

The Specific Plan proposes restoration of habitat along the north shore of Brisbane Lagoon and Visitacion Creek, as illustrated in **Figure 3-19** and **Figure 3-22,** that would provide in-kind replacement of wetlands and non-wetland waters.[136] Even with in-kind replacement, there would be a temporal loss of wetlands between the time the landfill is capped and before wetland features are recreated. A significant impact would occur.

Specific Plan requirements for physical barriers, such as cyclone fencing or equivalent screening, to be maintained along with educational signage for trails within and adjacent to areas of wetlands and non-wetland waters, would reduce minimize associated with human encroachment. In addition, trails within the wetland portions of Visitacion Creek and Lagoon Park would be provided on raised platforms, resulting in minimal effects on habitat areas. Thus, impacts associated with human encroachment would be less than significant.

[136] While the Specific Plan's intention is to enhance Visitacion Creek and along the north shore of the lagoon to replace habitat lost due to site grading and development, resource agencies may not accept enhancement or mitigation actions located within the landfill footprint as mitigation and could require additional off-site mitigation.

Program EIR Mitigation Measures

MM BIO-2a: Avoid or Minimize Adverse Effects on Sensitive Natural Communities and Wetland Areas (Program EIR Mitigation Measure 4.C-2a). The applicant shall avoid or minimize adverse effects on sensitive natural communities and restored wetland mitigation areas. After site grading has concluded, measures shall be implemented to avoid impacts to sensitive natural communities or restored habitat areas, including the installation of silt fencing, straw wattles, or other appropriate erosion and sediment control methods or devices to prevent runoff and construction debris from entering these areas. Such measures shall also be employed where pre-construction grading and post-remediation development requires work adjacent to sensitive natural communities, either prior to or after restoration of those areas occurs. Where construction activities occur in the vicinity of sensitive natural communities on-site, the following shall be implemented to ensure no loss of restored mitigation sites:

- Fencing shall be erected adjacent to the areas where construction is occurring to avoid unintended impacts to sensitive natural areas that occur just outside the construction area and shall be constructed in a manner that will not impede wildlife access to wetland areas. Construction workers will be educated about local resources and instructed to avoid sensitive habitats during construction, including limiting any human intrusion into natural areas.
- If work in the vicinity of natural communities cannot be avoided, work within these areas shall be conducted during the dry season, typically between May 1 and October 15, and shall occur under permit authority of the California Department of Fish and Wildlife, the Corps of Engineers, and the Regional Water Quality Control Board pursuant to the Clean Water Act Section 404 requirements for avoidance, mitigation, and monitoring. Mitigation Measures MM BIO-2b, MM BIO-2c, and MM BIO-2d shall also apply if work cannot be avoided in or directly adjacent to sensitive natural areas or restored habitats.

MM BIO-2b: Maintain Water Quality and Control Erosion and Sedimentation during Construction (Program EIR Mitigation Measure 4.C-2b). The measures described below shall be employed to avoid degradation of natural communities or sensitive natural communities by maintaining water quality and controlling erosion and sedimentation during construction as required by compliance with the National Pollutant Discharge Elimination System (NPDES) General Permit

for Construction Activities to address impacts on water quality. In addition, measures shall include, but not be limited to, the following:

- Installing silt fencing between aquatic sensitive natural communities and Project-related activities;
- Locating fueling stations away from potentially jurisdictional areas and features; and
- Isolating construction work areas from any identified jurisdictional features.

MM BIO-2c: Water Quality Protection Measures near Aquatic Sites (Program EIR Mitigation Measure 4.C-1g). Construction and operation of proposed uses and open space areas along Visitacion Creek or adjacent to the northern Lagoon edge shall include implementation of erosion control and water pollution control measures consistent with Stormwater Pollution Prevention Program (SWPPP) requirements, and implementation of an ongoing maintenance plan to ensure no reduction in water and environmental quality within the Creek and lagoon.

Project applicants shall provide the City with proof that appropriate stormwater permits have been obtained pursuant to the City of Brisbane's NPDES stormwater discharge permit, the San Francisco Regional MS4 Permit. This shall include construction site inspection and control programs at all construction sites, with follow-up and enforcement consistent with each Permittee's respective Enforcement Response Plan, to prevent construction site discharges of pollutants and impacts on beneficial uses of receiving waters. The goal of Provision C.3 of the MS4 Permit is for the Permittee, such as the City of Brisbane, to use their planning authorities to include appropriate source control, site design, and stormwater treatment measures in new development and redevelopment projects to address both soluble and insoluble stormwater runoff pollutant discharges and prevent increases in runoff flows from new development and redevelopment projects. This goal is to be accomplished primarily through the implementation of low impact development techniques.

Project applicants shall comply with local municipal requirements and the local stormwater program as mandated under the Municipal Stormwater Permit, including, at minimum, the following measures:

- Plan the development to fit the topography, soils, drainage pattern and natural vegetation of the Baylands.

- Delineate clearing limits, easements, setbacks, sensitive or critical areas, trees, drainage courses, and buffer zones to prevent excessive or unnecessary disturbances and exposure.
- Phase grading operations to reduce disturbed areas and time of exposure.
- Avoid excavation and grading during wet weather.
- Limit on-site construction routes and stabilize construction entrance(s) and exit(s).
- Any increase in impervious surface area shall include establishment of vegetated swales, permeable pavement materials, preserve vegetation, re-plant with native vegetation and appropriate measures should be evaluated and implemented where appropriate.
- Whenever practicable, native vegetation buffer areas shall be provided as part of a project to control pollutants from entering the Bay, and vegetation shall be substituted for rock riprap, concrete, or other hard surface shoreline and bank erosion control methods where appropriate and practicable.
- Construct diversion dikes and drainage swales to channel runoff around the site and away from bodies of water.
- Use berms and drainage ditches to divert runoff around exposed areas.
- Place diversion ditches across the top of cut slopes.
- No use of fertilizers or pesticides.

Applicants shall prepare a maintenance program for approval by the City that includes maintenance of water quality pollution-control features such as swales, sediment traps or other passive applications of pollution-prevention measures required as part of NPDES permitting. The maintenance program shall address the management of open space adjacent to the Brisbane lagoon and Visitacion Creek and, at minimum, shall include the following requirements, to be performed to the satisfaction of the City:

- Identify the entity responsible for ongoing maintenance of the lagoon perimeter and recreational facilities within the perimeter area (e.g., property owners' association, landscape maintenance district), along with provisions permitting the City to enforce maintenance requirements and recoup costs for such enforcement.
- Provide trash receptacles at appropriate locations and regular litter removal.

- Maintain all improvements within the lagoon perimeter in a safe and working condition.
- Identify a funding mechanism to ensure site maintenance and implementation of environmental quality monitoring at the creek and lagoon as part of the open space interpretive center. Monitoring parameters shall include water quality monitoring that, at a minimum, tests the first draw of stormwater from the new rainy season, and may include, but not be limited to vegetation monitoring, and passive observation and recording of fish species present.

MM BIO-2d: Compensatory Mitigation, Monitoring, and Reporting for Impacts to Wetlands and Non-Wetland Waters and Sensitive Natural Communities (Program EIR Mitigation Measure 4.C-2c). Where disturbance to sensitive natural communities including jurisdictional wetlands and non-wetland waters cannot be avoided, compensation shall be provided for temporary impacts and permanent loss to ensure that there is no overall loss of sensitive natural communities as a result of Baylands development. Onsite, in-kind replacement of sensitive natural communities including coastal scrub, willow scrub, tidal marsh, freshwater emergent wetlands, and lined manmade drainages that have developed bed and bank characteristics shall be a condition of development. Compensation shall be detailed on an impact-specific basis and shall include development of an onsite Wetland Mitigation and Monitoring Plan, which shall be developed prior to Project Site development or in coordination with permit applications and/or conditions. Alternately, offsite mitigation may be pursued through an approved mitigation bank, although this option may result in a higher ratio for compensation. At a minimum, such plans shall include:

- Baseline information, including a summary of findings for the most recent wetland delineation conducted at the Project Site;
- Anticipated habitat enhancements to be achieved through compensatory actions, including mitigation site location (onsite enhancement or offsite habitat creation) and hydrology;
- Performance and success criteria for wetland creation or enhancement including, but not limited to, the following:
    - At least 90 percent survival of installed plants for each of the first three years following planting.
    - Performance criteria for vegetation percent cover in Years 1-4 as follows: at least 10 percent cover of installed plants in Year 1; at least 20 percent cover in Year 2; at least 30 percent cover in Year 3; at least 40 percent cover in Year 4; and at least 50 percent cover in Year 5.

- Performance criteria for hydrology in Years 1-5 as follows: 14 or more consecutive days of flooding, ponding, or a water table 12 inches or less below the soil surface during the growing season at a minimum frequency of three of the five monitoring years; OR establishment of a prevalence of wetland obligate plant species.
- Invasive plant species that threaten the success of created or enhanced wetlands should not contribute relative cover greater than 35 percent in Year 1, 20 percent in Years 2 and 3, 15 percent in Year 4, and 10 percent in Year 5.
- If necessary, supplemental water shall be provided by a water truck for the first two years following installation. Any supplemental water must be removed or turned off for a minimum of two consecutive years prior to the end of the monitoring period, and the wetland must meet all other criteria during this period. At the end of the five-year monitoring period, the wetland must be self-sufficient and capable of persistence without supplemental water.
- At least 75 percent cover by hydrophytic vegetation at the end of the five-year monitoring period. In addition, wetland hydrology and hydric soils must be present and defined as follows:
    - *Hydrophytic vegetation* – A plant community occurring in areas where the frequency and duration of inundation or soil saturation produce permanently or periodically saturated soils of sufficient duration to exert a controlling influence on the plant species present.
    - *Wetland hydrology* – Identified by indicators such as sediment deposits, water stains on vegetation, and oxidized rhizospheres along living roots in the upper 12 inches of the soil, or satisfaction of the hydrology performance criteria listed above.
    - *Hydric soils* – Soils that are saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions, which are often characterized by features such as redox concentrations, which form by the reduction, translocation, and/or oxidation of iron and manganese oxides. Hydric soils may lack hydric indicators for a number of reasons. In such cases, the same standard used to determine wetland hydrology when indicators are lacking can be used.

  - Five years after any wetland creation, a wetland delineation shall be performed to determine whether created wetlands are developing according to the success criteria outlined in the project permits. If they are not, remedial measures such as re-planting and or re-design and construction of the created wetland shall be taken to ensure that the Project's mitigation obligations are met.

- Monitoring and reporting requirements. If permanent and temporary impacts on jurisdictional waters cannot be compensated onsite through the restoration or enhancement of wetland features incorporated within proposed open space areas, the specific project applicant shall provide additional compensatory mitigation for these habitat losses. Potential options include the creation of additional wetland acreage onsite, the purchase of mitigation bank credits, or the purchase, implementation, and maintenance in perpetuity of offsite mitigation as approved by the City and state and federal permitting agencies. Offsite compensatory mitigation would be required to fulfill the performance standards described above.

Significance Conclusion for Impact BIO-2 with Implementation of Program EIR Mitigation Measures

The Program EIR identified Mitigation Measures MM BIO-2a (Program EIR Mitigation Measure 4.C-2a) to avoid and reduce impacts on sensitive natural communities, including jurisdictional wetlands and waters. and maintain water quality during construction; and Mitigation Measure MM BIO-2d (Program EIR Mitigation Measure 4.C-2c) to compensate for impacts to such areas where avoidance is not possible. These measures did not, however, contain explicit performance standards for sensitive natural community restoration areas for which additional mitigation is needed.

In addition, the Specific Plan's proposed phasing of habitat restoration improvements in relation to sensitive natural community disturbance at Visitacion Creek and the north shore of Brisbane Lagoon could result in a temporal gap as long as 10-12 years between the impacts and site restoration.

In addition, the Specific Plan's proposed phasing of sensitive natural community disturbance relative to restoration timing, particularly at Visitacion Creek and the north shore of Brisbane Lagoon, could result in a temporal gap as long as 10-12 years between the impacts and site restoration, resulting in a significant impact. Additional mitigation would be required to address these wetland restoration performance standards.

The Specific Plan identified Mitigation Measures MM BIO-2b and MM BIO-2c (Program EIR Mitigation Measures 4.C-2b and Measures 4.C-2c) to protect water quality and reduce the

effects of water pollution on aquatic habitat. Implementation of these measures would reduce such effects to less than significant.

Additional Mitigation Measure

MM BIO-2e: Design and Reporting Performance Standards for Sensitive Natural Community Restoration Areas. The wetland mitigation and monitoring plan described in Mitigation Measures MM BIO-2d shall additionally include design-level plans detailing the restoration of Visitacion Creek and the north shore of Brisbane Lagoon. The plan shall also include long-term monitoring requirements. Additional elements to include in the plan are as follows:

- The location of restored/enhanced habitats that provide at least a 1:1 in-kind replacement ratio by acreage and habitat type.
- An assessment of existing and proposed wetland and non-wetland waters habitat functions and values, including a discussion of sensitive habitats, soils, hydrology, and existing or potential sensitive species that are or would be supported by existing or proposed habitats demonstrating no net loss of habitat functions and values.
- Planting specifications for habitat areas (e.g., tidal, intertidal, and freshwater marsh).
- A strategy for invasive species management in mitigation areas.
- Location and design of recreational improvements, including buffer areas required to protect mitigation areas from encroachment by visitors or pets, including specific planting/management plan.
- Site monitoring and management responsibilities to be carried out over a minimum of 5 years based on identified performance standards and success criteria.
- Contingency measures, including the need for additional planting, watering, and/or maintenance, and an extension of monitoring requirements if standards are not met within the initial 5-year performance period.

MM BIO-2f: Performance Standards to Minimize Temporal Habitat Losses. To facilitate natural revegetation near restored aquatic sites, final grading for Visitacion Creek and Lagoon Park shall be completed within 2 years of initial site disturbance, or as otherwise determined by the city.

Significance Conclusion for Impact BIO-2 with Implementation of All Mitigation Measures

The Baylands Specific Plan area and surrounding areas support wetlands and non-wetland aquatic habitats and sensitive natural communities that would be graded and removed as part of Specific Plan development. Mitigation Measures MM BIO-2a, MM BIO-2d, and MM BIO-2e avoid and minimize adverse effects to wetland and non-wetland waters and ensure no net loss of wetland and non-wetland waters acreage, functions, and values. Mitigation Measures MM BIO-2f defines the allowable timeframe for the temporal loss of on-site wetlands. Mitigation Measures MM BIO-2d and MM BIO-2e affirm that because disturbance to wetland and non-wetland waters cannot be avoided, compensation shall be provided for temporary and permanent loss to jurisdictional resources on a 1:1 mitigation of in-kind habitat. Mitigation Measures MM BIO-2d and MM BIO-2f identify the requirements of a Compensatory Wetland Mitigation and Monitoring Plan to explicitly demonstrate how mitigation would be successfully implemented, including planting plans for tidal wetland and freshwater/marsh wetlands; specific performance and success criteria for revegetation; monitoring requirements and approaches; and long-term management plans. Implementation of Mitigation Measures MM BIO-2a through MM BIO-2f would ensure that a less than significant impact would occur with respect to the loss of wetland and non-wetland waters, including temporal impacts. Consequently, impacts would be less than significant with mitigation incorporated.

Adherence to required NPDES permits, SWPPPs, and implementation of Mitigation Measures MM BIO-2b and MM BIO-2c would ensure that Baylands construction activities would not degrade aquatic and marsh wildlife habitat due to sediment discharge. Impacts would therefore be less than significant with mitigation incorporated.

c. Threshold BIO-3: Fish and Wildlife Movement

Methodology for Determining Significance

As discussed above, proposed habitat enhancements and mitigation measures for Icehouse Hill would create the potential for butterfly movement between Icehouse Hill and the San Bruno Mountain Habitat Conservation Plan area. Thus, analysis of impacts on wildlife movement focuses on avian movement through the Baylands. Should on-site buildings be of sufficient height and have a design that could obstruct avian movement or cause bird strikes within the Baylands, the Specific Plan would cause a significant impact.

Impact Assessment

Wildlife movement corridors may provide favorable locations for wildlife to travel between different habitat areas such as foraging sites, breeding sites, cover areas, and preferred summer and winter range locations. They may also function as dispersal corridors, allowing animals to

move between various locations within their range. Topography and other natural factors, in combination with human disturbance or urban development, can fragment or separate large open-space areas and wildlife habitats, thus impeding wildlife movement between areas of suitable habitat. This fragmentation creates isolated "islands" of vegetation that may not provide sufficient area to accommodate sustainable populations and can adversely affect genetic and species diversity. Movement corridors lessen the effects of this fragmentation by allowing animals to move between remaining habitats, which in turn allows genetic exchange between separate populations. CDFW's California Essential Habitat Connectivity online data viewer provides a resource to view statewide areas of natural landscape blocks, areas that connect these landscape blocks, and areas that are important for biological conservation (CDFW 2024). The Baylands Specific Plan area is not located within a mapped California Essential Habitat Connectivity landscape block, is not within modeled blacktail deer habitat connectivity or movement areas, and is not recognized as a wildlife movement corridor (CDFW 2024).

There is limited potential for terrestrial wildlife movement through the Baylands Specific Plan area given the area's existing physical barriers to wildlife movement, including major roads and highways, industry, railroad tracks, pipelines, and fences. However, small resident wildlife species may move along Visitacion Creek and within the freshwater marshes in the western portion of the site. No native wildlife nursery sites were identified within the Specific Plan area; therefore, no impacts to such areas would occur.

For rare butterflies, Icehouse Hill provides potential connection to habitat on San Bruno Mountain with butterfly habitat patches within Baylands. The Specific Plan proposes to avoid development within rare butterfly habitat on Icehouse Hill, with the intention to improve on-site habitat and movement opportunities for such species in the long run.

Fish and other aquatic species may enter Baylands waters through culverts under US Highway 101. These waters provide foraging habitat only and do not provide or connect to spawning habitat for any species. Site remediation will reduce the contaminants from entering Brisbane Lagoon and San Francisco Bay, thereby reducing toxins in the local aquatic food chain; while eelgrass planting in the Lagoon and shoreline enhancements would improve habitat for native fish.

Marine mammals may occasionally stray into Brisbane Lagoon while foraging, but site improvements would have no impacts to these species. In the long-term, site improvements will improve foraging habitat quality for marine mammals by reducing toxins entering San Francisco Bay and promoting the revegetation of marine and shoreline habitats.

Terrestrial Species

Present conditions within the Baylands include fragmented habitat for terrestrial species, including amphibians, reptiles, and small mammals, in freshwater wetlands and tidal marshlands, with scattered trees and grassland vegetation providing nesting habitat for birds.

Barriers including the railroad, major roads, and industrial development impede the use of the Baylands for wildlife movement.

Following construction and restoration of wetland and upland habitat areas within Baylands Park, the Ecological Park, Visitacion Creek, Icehouse Hill, Lagoon Park, and the Baylands Preserve (see **Figure 3-13** in Draft EIR Chapter 3, *Project Description*), the Specific Plan would provide connectivity for terrestrial species that use wetland habitats and aquatic corridors. This would be ensured through implementation of the habitat restoration and enhancement plans contained in the Specific Plan for Visitacion Creek and Lagoon Park. Under-road wildlife connections would be provided at Tunnel Avenue, Visitacion Creek Road North, and Sierra Point Parkway in the form of a small culvert or clear-span bridge sized appropriately for small terrestrial fauna to traverse between local and regional habitat patches. The under-road wildlife connection provided at Sierra Point Parkway and the Bay Trail would consist of a clear-span bridge to replace the existing culvert.

Butterflies

The distance between Icehouse Hill and the easternmost point of San Bruno Mountain (the Carter-Martin management unit) is 0.23 mile, less than the reported 0.75-mile dispersal distance for Callippe silverspot butterfly (Coast Ridge Ecology 2023). However, these butterfly species have a high habitat specificity and short reproductive season, with one generation per year. Butterfly reproduction further depends on temperature, precipitation, and wind speed (San Mateo County Parks Department 2008). These factors reduce the likelihood or frequency of the Baylands serving as a habitat corridor for these butterfly species.

The currently proposed layout of trails on Icehouse Hill as provided in the Specific Plan (Baylands Development Inc. 2023) would cross a grassland area with host plants (*Viola pedunculata*) for the Callippe silverspot butterfly. Although surveys during flight season did not find evidence of this species within the Baylands (Coast Ridge Ecology 2023; Biohabitats 2023c), larvae or pupae could be present in leaf litter in areas containing the host plant. Thus, damage or removal of this grassland habitat would result in a significant impact on wildlife movement.

As provided in Mitigation Measure MM BIO-1c above, trails and other recreational facilities on Icehouse Hill would be sited and constructed to avoid damage to larval host plants and nectar plants (which feed adult butterflies), while restricting visitor access within sensitive areas. Ongoing management would be required to implement the proposed actions, remove invasive plants in the grassland, and control future encroachment and proliferation of invasive species (Coast Ridge Ecology 2023), as indicated by Mitigation Measure MM BIO-1c. As further required by Mitigation Measure MM BIO-1c, Icehouse Hill would host nectar plants that would also be suitable for pollinators, which would support movement of butterflies, bees, moths, and other pollinators.

Birds

Thousands of migratory birds use the Pacific Flyway during spring and fall, passing over the San Francisco Peninsula and the Bay. Migrating birds such as songbirds, including special-status species, can be affected by human-built structures because of their propensity to migrate at night, their low flight altitudes, and their tendency to be disoriented by artificial light, making them vulnerable to collision with obstructions. Bird-strike impacts resulting from development of the Specific Plan's medium and high density residential and commercial areas with structures having reflective surfaces, as well as additional night lighting, would increase bird-strike hazards to avian movement through the Baylands.

Bird flights close to man-made structures risk collisions with these structures. Approximately 100 million to 1 billion birds die in North America as a result of building collisions each year (Seewagen and Sheppard 2017). Daytime collisions occur most often when birds fail to recognize window glass because it reflects clouds and sky. Lighting also affects birds during their movement and reproduction. Indirect effects of light disturbance on migratory birds include delayed arrival at breeding or wintering grounds, and reduced energy stores necessary for migration, winter survival, or subsequent reproduction (Gauthreaux and Belser 2006).

Under existing conditions, the Baylands presents minimal obstacles for migratory birds as the site primarily consists of a landfill and open areas, with low-lying buildings interspersed. Mid- and high-rise buildings over 50 feet in height, including commercial and residential towers up to 270 feet in height within proposed medium- and high-density development areas (see **Figure 3-6** in Draft EIR Chapter 3, *Project Description*), would provide limited space for migrating birds to pass. These buildings would also increase the likelihood of migratory and resident birds striking windows of the on-site buildings during flight, causing injury or mortality, particularly when nearby landscape areas are reflected onto these windows during the day or a building's interior nighttime lighting gives the appearance to birds that the exterior of a building is not a solid surface. Landscaping within the Specific Plan's park and habitat areas could also attract birds to its trees and may increase the likelihood of bird collisions with nearby structures.

The Specific Plan's Development Standards require that buildings taller than 100 feet employ the following bird-friendly design strategies:

- Consult a qualified biologist experienced with urban building bird-strike design issues to identify measures related to the external appearance of the building to minimize the risk of bird strike; and
- Use a bird-friendly glazing treatment on the façades of any floor within 12 feet of the level from a green roof if the façade has 50 percent or more glazed surface.

Examples of bird-friendly glazing treatments identified in the Specific Plan to be employed include but are not limited to:

- Use of paned glass with fenestration patterns;
- Use of decorative screens, applied film, louvers, angled, fritted and/or frosted glass; and
- Use of window treatments that reduce transmission of light of the building.

Different agencies and organizations have established varying standards for avoiding bird collisions, typically establishing 100 feet or less above grade as the primary area in which bird collisions occur. According to the City of San Francisco's *Standards for Bird-Safe Buildings* (SF Bird-Safe Buildings) (San Francisco Planning Code Section 139), "the most hazardous areas of all buildings, especially during the day and regardless of overall height, are the ground level and bottom few stories." The publication indicates the typical bird building collision zone is up to 60 feet. The New York City *Bird Friendly Building Design & Construction Requirements Guidance Document* (November 2020) indicates the bird building collision zone is typically up to 75 feet, and the Washington, D.C., *Migratory Local Wildlife Protection Act of 2022* (Law 24-337) cites a bird collision zone of up to 100 feet. For purposes of this analysis, the portions of buildings up to 100 feet above grade are considered potential bird collision zones.

Development within the Specific Plan area, combined with the development's proximity to natural areas, including on-site features, such as the restored/enhanced Visitacion Creek and Brisbane Lagoon, and off-site areas, including the San Francisco Bay and San Bruno Mountain Park, have the potential to increase the number of bird strikes compared to existing conditions. In addition, building night lighting during operation (i.e., internal lighting and lighting provided on the exterior of buildings, walkways, and parking areas) could attract migratory birds and increase the likelihood of strike injuries or mortality. Night migrants depend on starlight for navigation, and brightly lit buildings or areas can draw them off course.

Fish and Marine Mammals

A host of aquatic species, including marine invertebrates and native and introduced fish, occur in San Francisco Bay and Brisbane Lagoon. Habitat restoration and enhancement actions under the Specific Plan are planned to improve habitat along the shoreline of Brisbane Lagoon. These actions include planting tidal flats with eelgrass and redesigning riprapped shorelines with limited vegetation to support transitional saltmarsh habitat. Moreover, the capping of contaminated soils in upland portions of the site will isolate toxic substances, preventing them from entering the aquatic food chain, which could benefit fish species such as the bat ray, leopard shark, and striped bass, among others. Direct construction impacts to fish are expected to be less than significant because no sensitive spawning or rearing habitat occurs on-site or in Brisbane Lagoon, and foraging individuals, if present, would be able to move away from construction disturbance areas. Long-term benefits to fish and other aquatic species include reduced contamination and enhanced foraging habitat quality. Similarly, marine mammals

would not be subject to short- or long-term impacts during construction but would benefit from improved habitat conditions within the Lagoon and San Francisco Bay.

Significance Conclusion for Impact BIO-3

There is limited potential for terrestrial wildlife movement through the Baylands Specific Plan area given the area's existing physical barriers to wildlife movement including major roads and highways, industry, railroad tracks, pipelines, and fences. However, wildlife would move along Visitacion Creek and within the freshwater marshes in the western portion of the site. Maintaining and enhancing this movement would be ensured through development and implementation of a Project-wide Open Space Plan (Mitigation Measure MM BIO-3a), Marsh Wildlife and Habitat Protection Plan (Mitigation Measure MM BIO-3b), and a pet safe policy that would apply during construction and operations (Mitigation Measure MM BIO-3c). Habitat enhancements proposed for Icehouse Hill along with recreational improvements consistent with Mitigation Measure MM BIO-1c would also provide for movement of butterflies between Icehouse Hill and the San Bruno Mountain Conservation Area.

Development of commercial and residential buildings, as well as additional night lighting, would increase bird strike hazards to avian movement through the Baylands. This is a significant impact.

Program EIR Mitigation Measures

MM BIO-3a: Wildlife-Safe Pet Policy during Construction and Operations (Program EIR Mitigation Measure 4.C-4c). All development on the Baylands shall be required to have a no-pets policy for construction workers. All development within the Baylands that includes a residential component shall also include a pet policy that requires residents to adhere to the measures of this policy to prevent impacts on wildlife from domestic animals. The policy shall become a part of the Covenants, Conditions, and Restrictions (CC&Rs) attached to each property deed for for-sale residential properties and enforced through the homeowner's association or other entity specified in the CC&Rs and made part of leases for residential rental properties and commercial leases within the Baylands. The pet policy shall limit the number of animals per residence and require adult cats, dogs, and rabbits to be spayed or neutered. Cats and dogs shall be required to be kept inside the residences and allowed outside residences only if on a leash and under the tenant's control and supervision, except within areas specifically designed as dog parks. To provide effective predator control, feral animal trapping may be necessary.

MM BIO-3b: Use of Wildlife-Friendly Lighting (Program EIR Mitigation Measure 4.C-4d). During design of any building greater than 100 feet tall, the applicant and architect shall consult with a qualified biologist experienced in building/lighting design issues (as approved by the City of Brisbane Planning Department) to identify lighting related measures to minimize the effects of the building's lighting on birds. Such measures, which may include the following and/or other measures, shall be incorporated into the building's design and operation.

- Use strobe or flashing lights in place of continuously burning lights for obstruction lighting. Use flashing white lights rather than continuous light, red light, or rotating beams.
- Install shields onto light sources not necessary for air traffic to direct light towards the ground.
- Extinguish all exterior lighting (i.e., rooftop floods, perimeter spots) not required for public safety.
- When interior or exterior lights must be left on at night, the operator of the buildings shall examine and adopt alternatives to bright, all-night, floor-wide lighting, which may include:
    - Installing motion-sensitive lighting.
    - Using desk lamps and task lighting.
    - Reprogramming timers.
    - Use of lower-intensity lighting.
    - Windows or window treatments that reduce transmission of light out of the building will be implemented to the extent feasible.
    - Educational materials will be provided to building occupants encouraging them to minimize light transmission from windows, especially during peak spring and fall migratory periods, by turning off unnecessary lighting and/or closing drapes and blinds at night.
    - A report of the lighting alternatives considered and adopted shall be provided to the City of Brisbane Planning Department for review and approval prior to construction.
    - The City of Brisbane Planning Department shall ensure that lighting-related measures to reduce the risk of bird collisions have been incorporated into the design of such buildings to the extent practicable.

MM BIO-3c: Bird-Safe Building Design (Program EIR Mitigation Measure 4.C-4e). During design of any building greater than 100 feet tall, the applicant and architect shall consult with a qualified biologist experienced with urban building bird strikes design issues (as approved by the City of Brisbane Planning Department) to identify measures related to the external appearance of the building to minimize the risk of bird strikes. Such measures, which may include the following and/or other measures, shall be incorporated into the building's design:

- Use non-reflective tinted glass.
- Use window films to make windows visible to birds from the outside.
- Use external surfaces/designs that break up reflective surfaces.
- Place bird attractants, such as bird feeders and baths, at least three feet and preferably 30 feet or more from windows in order to reduce collision mortality.
- A report of the design measures considered and adopted shall be provided to the City of Brisbane Planning Department for review and approval prior to construction. The City of Brisbane Planning Department shall ensure that building design related measures to reduce the risk of bird collisions have been incorporated to the extent practicable.

Significance Conclusion for Impact BIO-3 with Implementation of Program EIR Mitigation Measures

The implementation of the Specific Plan's habitat conservation and enhancement program will incorporate wildlife movement corridors into the site design and enhance existing high-quality habitat for native plant and wildlife species. Proposed habitat enhancements and mitigation measures for Icehouse Hill will enhance butterfly movement opportunities between Icehouse Hill and San Bruno Mountain and reduce impacts to less than significant.

The Program EIR recognized the potential for impacts on migratory birds from night lighting and potential to collide with windows and reflective surfaces on tall buildings associated with development of the site, a potentially significant impact, and proposed mitigation to reduce the magnitude of the impact. Measures from the Program EIR reduce potential lighting impacts to birds and wildlife to less than significant. Significant advancements have been made over the last decade in the understanding of bird hazards and methods to reduce bird collision risks. This EIR provides additional mitigation measures to address impacts related to avian movement and building collisions.

Additional Mitigation Measures

MM BIO-3d: Additional Bird-Safe Building Design Requirements. All buildings shall be constructed to achieve a performance standard of a Threat Factor of 30 or less on each façade up to 100 feet above grade (American Bird Conservancy, no date).[137] The following requirements shall apply to meet this performance standard for the portions of all buildings up to 100 feet in height above grade, other than the Roundhouse, which is exempt from this requirement due to its historic character, need to maintain historic façade materials, and lack of reflective surfaces.

- No more than 5 percent of any building façade up to 40 feet above grade, as well as 24 feet above any green roof, shall exceed a Threat Factor of 30.
- The exterior wall envelope and any exterior fenestration on the portion of buildings between 41 feet and 100 feet above grade shall be constructed with bird friendly materials and shall not exceed a Threat Factor of 30 on any given façade. Other materials may be used to the extent they do not exceed an aggregate of 10 square feet within any 10-by-10-foot-square area of exterior wall below 100 feet above grade.
- No glazed corners or fly-through conditions shall exceed a Threat Factor of 30.
- For Threat Factors equal to or less than 30, the building shall be exempt from the building façade requirements.

During design of any building, the Project or Permit Applicant shall engage a qualified biologist (as approved by the City of Brisbane Planning Department) who is experienced with urban bird-safe building design methods to identify and approve building design treatments/elements that reflect the most current practice in bird strike protection for those portions of buildings up to 100 feet in height above grade and achieve the performance standards described above. Building designs shall also be approved by the City of Brisbane Building Department.

Building design treatments/elements that must be reviewed and incorporated into the building design to the extent needed to achieve the identified

[137] "Threat Factor" is defined by the American Bird Conservancy as a relative measure of a building material's visibility, which enables the bird to see and avoid the building surface and, as a result, reduce bird collisions. A Threat Factor of 30 suggests that bird collisions would be reduced by least 50 percent. Lower Threat Factors would reduce bird collisions by greater amounts. The American Bird Conservancy's inventory of estimated threat factors for building façades can be found at https://abcbirds.org/glass-collisions/products-database/.

performance standard of a Threat Level of 30 or less may include, but are not necessarily limited to, the following:

- *Glazing Treatments:* Glazing treatments shall be used to create a transparent (rather than reflective) surface that is visible to birds. Examples of bird-friendly glazing treatments include, but are not necessarily limited to, the following:
    - Use of glass or a glass coating that reflects ultraviolet light
    - Use of dichroic or translucent glass; dichroic glass achieves the appearance of changing colors by transmitting and reflecting light, while translucent glass is porous and opaque
    - Use of fritted or frosted glass or angled glass
    - Use of panned glass with fenestration patterns
    - Use of non-reflective, tinted glass
    - Art treatment of glass
- *Building and Fenestration Strategies (Architectural Features):* Architectural features shall be used to block the uninterrupted view of glass from birds and/or to provide a physical obstacle to bird strikes. Examples of building and fenestration strategies that would reduce the potential for bird-strikes include, but are not necessarily limited to, the following:
    - Use of architectural features that block the view of glass from birds, including screens, overhangs, louvers, and awnings
    - Use of netting that is stretched several inches over windows or entry ways to prevent birds from hitting the glass
    - Use of external surfaces/designs that break up reflective surfaces (e.g., well-articulated building facades and/or fenestration broken up with mullions or other treatments)
    - Avoid the use of transparent building corners
- *Design and Operation of Nighttime Lighting:* Each site-specific development project shall comply with Threshold AES-4 and Mitigation Measure MM AES-4, which provide night sky performance standards (e.g., light trespass restrictions). Examples of nighttime lighting design and operation that would comply with Threshold AES-4 and Mitigation Measure AES-4 and reduce the potential for bird-strikes caused by light

trespass, over-illumination, light clutter, or skyglow include, but are not necessarily limited to, the following:

- Low profile, low intensity lighting directed downward
- Shielded fixtures for outdoor lighting
- Motion sensor lighting and automatic shut offs for interior lights in unoccupied spaces
- Interior blinds that automatically close at night to block light transmission
- Motion sensor lighting and automatic shut offs for exterior lights where not required for public safety
- Minimize vanity lighting
- Strobe or flashing lights in place of continuously burning lights for obstruction lighting. Use flashing white lights rather than continuous light, red light, or rotating beams.
- Outdoor lighting and colors of lighting that would increase the visibility of buildings to birds without substantially increasing energy consumption or decreasing public safety.

Significance Conclusion for Impact BIO-3 with Implementation of All Mitigation Measures

Mitigation Measures MM-BIO-3a and MM-BIO-3b provide long-term open space planning and marsh protection planning for the Baylands. In addition, Mitigation Measure MM BIO-3c would establish a wildlife-safe pet policy that would apply during construction and operations to minimize impacts of pets on habitat areas.

Implementation of Mitigation Measures MM BIO-1a through MM BIO-1c would be reduce impacts to butterfly movement to less than significant, and in the long-term, restoration on Icehouse Hill would improve habitat for the Callippe silverspot butterfly and perhaps other listed butterfly species by providing a link to restored habitat in the Baylands (e.g., Icehouse Hill) and sensitive species resources on San Bruno Mountain.

Mitigation Measures MM BIO-3e and MM BIO-3f provide design requirements that would provide effective bird-safe building treatments to buildings to avoid or reduce bird mortality. Impacts would therefore be less than significant with mitigation incorporated. Mitigation Measures MM BIO-3d and AES-4 address the potential for nighttime lighting of buildings, which would reduce the potential for nighttime bird collisions. Thus, Impact BIO-3 would be less than significant with mitigation incorporated.

d. Threshold BIO-4: Brisbane Tree Ordinance

Methodology for Determining Significance

The Baylands Specific Plan was reviewed to determine whether any of its provisions would inhibit implementation of Brisbane Municipal Code Chapter 12.12. Should any Specific Plan provision conflict with or potentially inhibit the implementation of Chapter 12.12, a significant impact would result, and mitigation would be required.

The Bayshore Mobility Plan improvements, the existing Bayshore School, and offsite utility lines are within fully urbanized areas or underneath existing streets (potable and recycled water lines). These project components would not require tree removal and are therefore not discussed further.

Impact Assessment

Brisbane Municipal Code Chapter 12.12:

- Protects certain trees that contribute to the scenic beauty of the city, have been found to be of value or significance as a native tree species, or are required to be planted and maintained as a condition of development approval;
- Prevents the indiscriminate removal of trees; and
- Protects trees that provide protection against erosion, land instability, flooding, or other hazards.

The Municipal Code specifically defines protected tree species as:

(1) Any California bay (*Umbellularia californica*), coast live oak (*Quercus agrifolia*), or California buckeye (*Aesculus californica*) that is a mature tree;

(2) Any other tree designated as a protected tree by resolution of the City Council;

(3) Any tree, regardless of size, originally required by the City to be planted as a condition for the granting of a permit, license, or other approval, or any tree that existed at the time of the granting of such permit, license, or other approval and required by the City to be preserved as part of such approval; or

(4) Three or more mature trees of any one or more non-invasive species that are proposed to be removed from the same property or from adjacent property under common ownership.

Removal of protected trees requires a permit from the City, which typically requires replacement at a minimum ratio of 1:1 within a project site, off-site mitigation, or in-lieu payment. Severe trimming is defined as the removal of more than 50 percent of the foliage crown or more than 30 percent of the height of a tree.

Tree Removal and Replacement

The remediation and grading work at the Baylands would necessitate removal of nearly all trees presently on the site other than those on Icehouse Hill. These trees currently consist mainly of non-native acacia and eucalyptus species, as well as Monterey pines. As required by the Brisbane Municipal Code, prior to removing any trees from the site, the developer would apply for the necessary permit from the City and adhere to its provisions for tree replacement.

The Baylands Specific Plan's Open Space and Conservation Plan (Section 5.4.5) also requires replacement of removed trees at a minimum ratio of 1:1, including substituting native trees in place of non-native trees whenever possible. The minimum ratio of 1:1 is required to be met 5 years after planting; however, initial plantings may require greater than the minimum 1:1 ratio to achieve this standard. The Specific Plan commits to the planting of approximately 40 to 75 trees in the woodland habitat within planned open space, as well as planting of numerous ornamental trees within Baylands plazas and neighborhoods. The Specific Plan's on-site plantings would comply with the tree permit requirements and, as a result, ensure consistency with the City ordinance.

Impacts of the Relocated Fire Station

In addition to Baylands development, construction of a new City fire station at 140 Valley Road to replace the current fire station located at 3445 Bayshore Boulevard is proposed. The relocated and existing fire station sites were surveyed in February 2023 (ESA 2023). The existing fire station location would continue to be used by the North County Fire Authority for training purposes with no changes to the trees on the property.

The relocated fire station site consists of an existing large structure surrounded by a paved parking lot, which is bordered on the northeast by a stormwater swale downslope from Bayshore Boulevard. The perimeter of the site was lined with trees including blue gum (*Eucalyptus globulus*), blackwood acacia (*Acacia melanoxylon*), toyon (*Heteromeles arbutifolia*), pine (*Pinus* sp.), Monterey cypress (*Hesperocyparis macrocarpa*), and coast live oak (*Quercus agrifolia*). Ornamental trees including bottlebrush (*Callistemon* sp.) and a large Monterey cypress were also present near the building.

Because Municipal Code Chapter 12.12 is intended for private projects requiring permits from the City, relocation of the City's existing fire station by the North County Fire Authority and City would not require a City permit to remove trees within the relocation site. The relocated fire station will, however, provide 1:1 replacement of trees removed within the relocation site to the extent compatible with the fire station's emergency services functions. The Specific Plan's on-site plantings would comply with the tree permit requirements and, as a result, ensure consistency with the City ordinance.

Significance Conclusion for Impact BIO-4

Specific Plan development would result in the removal of nearly all trees within the Baylands. The Program EIR (Impact 4.C-5) found that site development would result in the removal of protected trees. In its analysis, the Program EIR concluded that reliance upon the City's tree ordinance, which requires a permit for tree removal and tree replacement at a minimum ratio of 1:1, would result in a less than significant impact with no mitigation required. Relocation of the City's existing fire station would also require removal of some existing trees at the relocation site. Such removed trees would be replaced at a 1:1 ratio to the extent possible given operational requirements for the relocated fire station.

The impact would, therefore, be less than significant.

e. Threshold BIO-5: San Bruno Mountain Habitat Conservation Plan

Methodology for Determining Significance

The Baylands Specific Plan area is not subject to the San Bruno Mountain Habitat Conservation Plan but has the potential to support or hinder the Habitat Conservation Plan's mission to conserve and restore listed butterflies. The Baylands Specific Plan was reviewed to determine whether any of its provisions would impair conservation and restoration of habitat for listed butterflies within the Habitat Conservation Plan area. This review focused on the physical environmental effects of Baylands development in relation to host plants and nectar plants within Icehouse Hill (see discussion of Impact BIO-3), above. In addition, the potential effects of the Specific Plan's proposal to relocate Mission Blue Nursery from its current location to the former police shooting range on Icehouse Hill were reviewed. Should Specific Plan development disrupt or adversely affect the ability of Mission Blue Nursery to continue growing native plants from seeds and cuttings collected by permit on San Bruno Mountain and providing these plants for ecological restoration projects on the mountain, such development would hinder the Habitat Conservation Plan's mission, and a significant impact would be identified.

The Bayshore Mobility Plan improvements, the existing Bayshore School, and offsite utility lines are within fully urbanized areas or underneath existing streets (potable and recycled water lines). These project component areas do not contain habitat for listed butterflies within the Habitat Conservation Area and are therefore not discussed further.

Impact Assessment

Although the Baylands is not subject to the San Bruno Mountain Habitat Conservation Plan, Baylands restoration would promote the goals of the Habitat Conservation Plan to conserve and restore listed butterflies. Specific Plan development would displace the Mission Blue Nursery

from its current site, which is leased from the Specific Plan applicant. The nursery is proposed to be relocated to Icehouse Hill as part of the hill's habitat and recreational improvements. The Specific Plan does not, however, explicitly address the timing of such relocation. Should the nursery's existing lease be terminated before its new site on Icehouse Hill is ready for occupancy, nursery operations would be adversely affected, which, in turn, could adversely affect ongoing habitat management and restoration efforts within the San Bruno Mountain Habitat Conservation Plan area.

Significance Conclusion for Impact BIO-5

Restoration of Icehouse Hill would promote the goals of the Habitat Conservation Plan to conserve and restore listed butterflies by restoring Icehouse Hill in a manner that supports native plants, and particularly host and nectar plants for listed butterfly species. Specific Plan implementation, in combination with Mitigation Measure BIO-1c would not conflict with the provisions of the San Bruno Mountain Habitat Conservation Plan and would likely result in a potentially beneficial impact on achieving the Habitat Conservation Plan's goals relative to listed butterfly species.

The Specific Plan would relocate Mission Blue Nursery to Icehouse Hill. Should there be a delay between the time the nursery would need to vacate its existing site and the time the new site on Icehouse Hill would be operational, this delay could lead to a temporary disruption in the nursery's ability to continue providing native plants for ecological restoration projects within the Habitat Conservation Plan area, which would be a significant impact.

Program EIR Mitigation Measures

No mitigation measures are being carried forward from the Program EIR.

Additional Mitigation Measures

MM BIO-5: **Relocation of Misson Blue Nursery.** The relocation of Mission Blue Nursery to its new location on Icehouse Hill shall be undertaken such that the Nursery is not required to vacate its existing facility until the relocation site on Icehouse Hill is ready to commence operation.

Significance Conclusion for Impact BIO-5 with Implementation of All Mitigation Measures

Mitigation Measure MM BIO-5 ensures that disruption to Mission Blue Nursery operations due to the nursery's relocation to Icehouse Hill would be minimized.

Impact BIO-5 is less than significant with mitigation incorporated.

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4.7 CULTURAL RESOURCES AND TRIBAL CULTURAL RESOURCES

4.7.1 INTRODUCTION

a. Overview

This section describes existing cultural resources and tribal cultural resources within the Baylands and its vicinity and analyzes the impacts of the proposed 2025 Specific Plan project on significant resources. Cultural resources include historic architectural resources and prehistoric- and historic-period archaeological resources. This section also addresses the potential for encountering human remains outside of formal cemeteries. The technical analyses of cultural resources and documentation of tribal consultation efforts are provided in EIR Appendix E and its Appendix C, respectively.

b. Definitions

Archaeological resources are the place or places where the remnants of a past culture survive in a physical context that allows for the interpretation of these remains. The physical evidence, or archaeological remains, usually takes the form of artifacts, features, and ecological evidence (NPS 2000).

Unique archaeological resources are defined in Public Resources Code Section 21083.2 as an "archaeological artifact, object, or site, about which it can be clearly demonstrated that without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- Contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information;
- Has a special and particular quality such as being the oldest of its type or the best available example of its type; or,
- Is directly associated with a scientifically recognized important pre-contact or historic event or person.

Before Present (BP) is a time scale used to specify when events in the past occurred. BP, when placed after a number (as in 2,500 BP), means "years before the present." This terminology is used to refer to dates that were obtained through the radiocarbon dating method.

Cultural resources are defined as buildings, sites, structures, or objects, each of which may have historic, architectural, archaeological, cultural, or scientific importance, according to CEQA.

Historic building or **historic site** is one that is noteworthy for its significance in local, state, or national history or culture, its architecture or design, or its works of art, memorabilia, or artifacts.

Historic context refers to the broad patterns of historical development in a community or its region that are represented by cultural resources. A historic context statement is organized by themes such as economic, residential, and commercial development.

Historic district means a geographical area or neighborhood containing a collection of residential and/or commercial historical buildings that generally represents a significant aspect of the community's architectural and/or development history.

Historic integrity is defined as the ability of a property to convey its significance.

Historical resources are defined as "a resource listed or eligible for listing on the California Register of Historical Resources" (CRHR) (Public Resources Code, Section 5024.1; 14 Code of California Regulations [CCR] 15064.5). Under CEQA Guidelines Section 15064.5(a), the term "historical resources" includes the following:

(1) A resource listed in or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (Public Resources Code, Section 5024.1).

(2) A resource included in a local register of historical resources, as defined in Section 5020.1(k) of the Public Resources Code or identified as significant in a historical resource survey meeting the requirements of Public Resources Code Section 5024.1(g), will be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.

(3) Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be a historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources (Pub. Res. Code Section 5024.1, Title 14 CCR, Section 4852) including the following:

(A) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

(B) Is associated with the lives of persons important in California's past;

(C) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or

(D) Has yielded, or may be likely to yield, information important in prehistory or history.

(E) The fact that a resource is not listed in, or determined to be eligible for listing in the California Register of Historical Resources, not included in a local register of historical resources (pursuant to Public Resources Code Section 5020.1(k)), or identified in a historical resources survey (meeting the criteria in Public Resources Code Section 5024.1(g)) does not preclude a lead agency from determining that the resource may be an historical resource as defined in Public Resources Code Sections 5020.1(j) or 5024.1.

Tribal cultural resources, pursuant to Public Resources Code Section 21074, include sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe that are:

- Included or determined to be eligible for inclusion in the California Register of Historical Resources;
- Included in a local register of historical resources; or
- Determined by the lead agency to be a tribal cultural resource based on substantial evidence, including consideration of the significance of the resource to a California Native American tribe.

4.7.2 PHYSICAL ENVIRONMENTAL SETTING

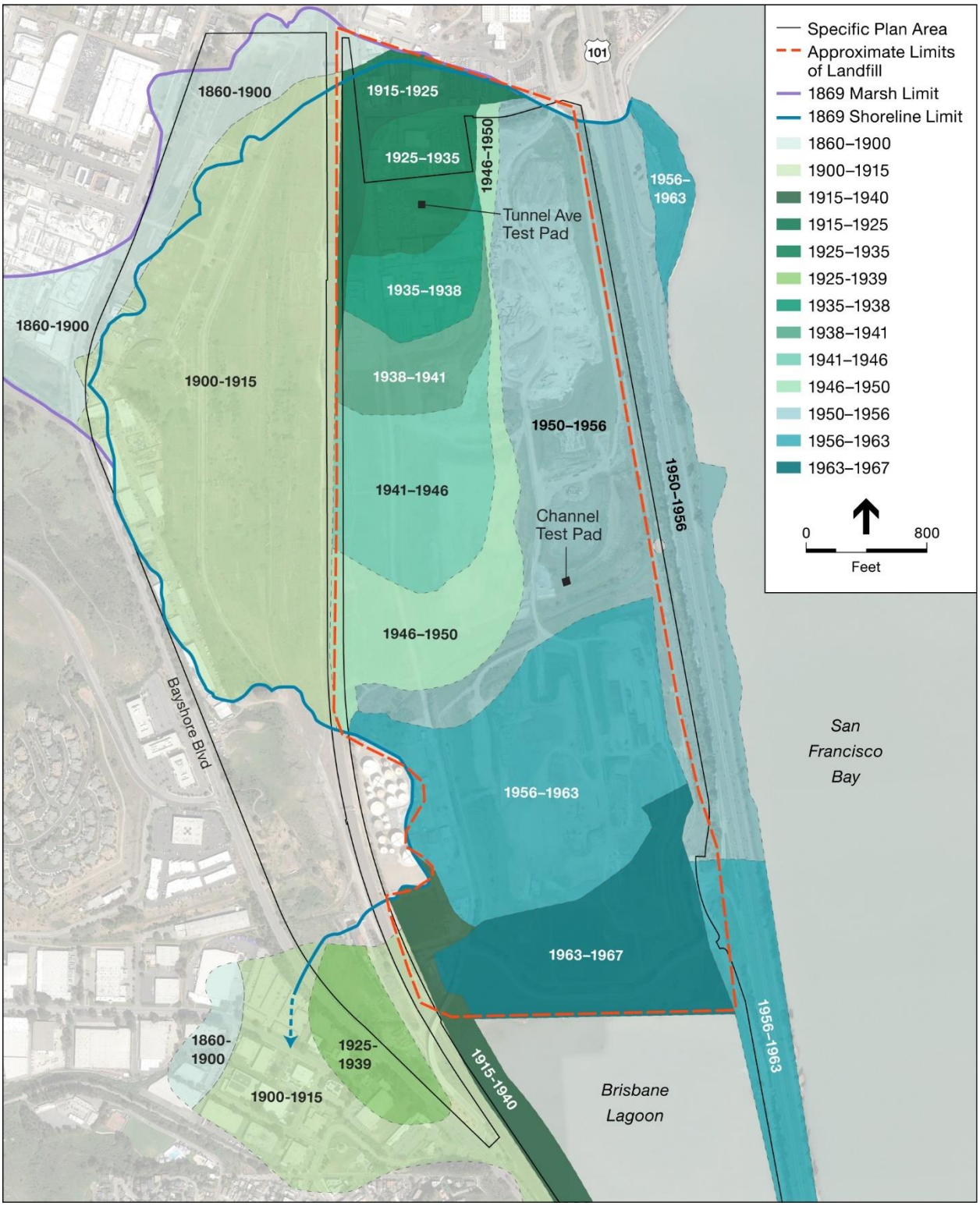
a. Baseline

The baseline for analysis of cultural resources and tribal cultural resources is the recirculated Notice of Preparation review period (Spring 2023).

b. Environmental Context

Except for Icehouse Hill, the Baylands was a tidal flat or part of the Bay prior to modern development of the San Francisco Bay Area. Historic-era and modern development over the last 180 years has completely transformed the landscape and landform of the Specific Plan area. As shown in **Figure 4.7-1** below, filling of the Bay leading to creation of the Baylands began in the late 1800s. In 1904, the Southern Pacific Railroad began construction of a new level route south from San Francisco that more closely followed the Bay's shoreline, known as the "Bayshore Cutoff" (see **Figure 4.7-2**). By 1914, the Southern Pacific Railroad railyard was installed, and by 1935, the entire portion of the Baylands west of the railroad tracks had been filled with rubble from the 1906 earthquake, debris, soil, and local bedrock rubble excavated during construction of tunnels and roads in the area.

Figure 4.7-1: Baylands Historic Fill



SOURCE: City of Brisbane, *Final Brisbane Baylands Program EIR*, August 2018; ENGEO, Final Landfill Closure Geotechnical Report, May 19, 2022.

Figure 4.7-2: Specific Plan Area as Viewed Looking North from Icehouse Hill, 1905

The in-progress railroad line through the middle of the photo is the Bayshore Cutoff that would become the eastern edge of the SPRR Bayshore yard through what is now the Baylands. The area east of the rail line would be filled with solid waste starting in the 1930's, creating the "Brisbane Landfill." The hill in the back right is Candlestick Point. (OpenSFHistory.org 2023)

Starting in the early 1930s, San Francisco began gradually filling in San Francisco Bay east of the railroad tracks with solid waste, creating the "Brisbane Landfill" and forming the eastern portion of the Baylands. The former Brisbane Landfill was filled in three areas:

- A portion that extended eastward about 1,000 feet into San Francisco Bay from near the Southern Pacific Railroad tracks was used for waste placement from 1932 until 1952. In 1948, construction of US Highway 101 east of the landfill set the eastern boundary for the landfill, which was then isolated from the direct wave action of San Francisco Bay.
- From 1953 to 1958, the landfill was extended eastward into San Francisco Bay and southward into what became the Brisbane Lagoon following freeway construction.
- An additional landfill area was created in 1959 when the landfill was extended farther south and used for waste placement until the landfill stopped receiving waste in 1967.

c. Cultural Context

Pre-contact Setting

The natural marshland communities along the edges of bays and channels were the principal source for subsistence and other activities during the prehistory of the San Francisco Bay region.

California's human history can be generally categorized into three periods: the *Early Period*, the *Middle Period*, and the *Late Period*. During the Early Period (Lower Archaic, 8000–3500 BCE), geographic mobility continued from the Paleoindian Period[138] and is characterized by the millingslab and handstone as well as large wide-stemmed and leaf-shaped projectile points. The first cut shell beads and the mortar and pestle are first documented in burials during the Early Period (Middle Archaic, 3500–500 BCE), indicating the beginning of a shift to sedentism. During the Middle Period, which includes the Lower Middle Period (Initial Upper Archaic, 500 BCE–CE 430), and Upper Middle Period (Late Upper Archaic, CE 430–1050), geographic mobility may have continued, although groups began to establish longer term base camps in localities from which a more diverse range of resources could be exploited. The first rich black middens are recorded from this period. The addition of milling tools, obsidian, and chert concave-base projectile points, as well as the occurrence of sites in a wider range of environments, suggest that the economic base was more diverse. By the Upper Middle Period, mobility was being replaced by the development of numerous small villages. Around CE. 430, a dramatic cultural disruption occurred as evidenced by the sudden collapse of the *Olivella* saucer bead trade network. During the Initial Late Period (Lower Emergent, CE. 1050–1550), social complexity developed toward lifeways of large, central villages with resident political leaders and specialized activity sites. Artifacts associated with the period include the bow and arrow, small corner-notched projectile points, and a diversity of beads and ornaments.

d. Ethnographic Setting

Prior to Euro-American contact, the San Francisco Bay Area was occupied by the Ohlone. The Ohlone once occupied a large territory from San Francisco Bay in the north to the Big Sur and Salinas rivers in the south.

In 1770, the Ohlone lived in approximately 50 separate and politically autonomous nations, with the Yelamu people of Visitacion Valley being most closely associated with the Specific Plan area. During the Mission Period (1770 to 1835), native populations, especially along the California coast, were brought—usually by force—to the missions by the Spanish missionaries to provide labor. The missionization caused the Ohlone people to experience cataclysmic changes in almost all areas of their life, particularly a massive decline in population caused by

[138] The *Paleoindian Period* (11500–8000 B.C.), evidence of which has not yet been discovered in the San Francisco Bay Area, is characterized by big-game hunters occupying broad geographic areas.

introduced diseases and declining birth rate, resulting in large part from colonization by the Spanish missionaries. Following the secularization of the missions by the Mexican government in the 1830s, most Native Americans gradually left the missions and established rancherias in the surrounding areas.

Economically, the Ohlone engaged in hunting and gathering. Their territory encompassed both coastal and open valley environments that contained a wide variety of resources, including grass seeds, acorns, bulbs and tubers, bear, deer, elk, antelope, a variety of bird species, and rabbit and other small mammals. The Ohlone acknowledged private ownership of goods and songs, and village ownership of rights to land and/or natural resources; they appear to have aggressively protected their village territories, requiring monetary payment for access rights in the form of clam shell beads, and even shooting trespassers if caught.

After European contact, Ohlone life ways were severely disrupted by missionization, disease, and displacement. Today the Ohlone still have a strong presence in the San Francisco Bay area.

e. Historic Setting

Brisbane is part of the area that encompassed the 9,594 acres granted to Jacob Lesse in 1841 in the *Rancho Canada de Guadalupe la Visitacion y Rodeo Viejo* Mexican land grant. In 1843, Lesse traded his grant to Robert Ridley, and in 1884, Charles Crocker bought the land, naming it "Visitacion Ranch." Following the 1906 San Francisco earthquake, real estate entrepreneurs attempting to develop the area named their new town the "City of Visitacion," but lack of funding for necessary civil services halted plans for a developed town. Instead, the area was inhabited by a small population of rural families during the first quarter of the 20th century (Oral History Associates 1986).

It was in 1929 that the community adopted the name "Brisbane" and experienced its first major growth phase. Throughout the 1930s, the residential area boomed due to its affordability, with 400 homes built between 1929 and 1933. By 1940, the town had grown to nearly 2,500 inhabitants, from a population of 28 in 1929. The City of Brisbane was incorporated in 1961, and the Baylands area was annexed into the City in 1962 (Oral History Associates 1986).

The Baylands site is located on filled land reclaimed from tidal marshlands along San Francisco Bay (see **Figure 4.7-1**). Bayshore Boulevard traces the approximate path of the original San Francisco Bay shoreline except where it abuts Icehouse Hill.

The western portion of the Baylands is the site of the former Southern Pacific Railroad (SPRR) rail maintenance yard. The area east of the rail corridor was used as a municipal landfill site beginning in the 1930s. The construction of US Highway 101 in the mid-1950s established the easternmost boundary of the Bay fill. After the landfill operation was discontinued in 1967, a soil cover approximately 20 to 30 feet deep was placed over the site. Since the 1940s, a variety of

uses, including the existing lumberyard and small industrial uses were developed atop the oldest part of the landfill.

Railroad Development

The western portion of the Baylands is primarily associated with early-20th century railroad development. The San Francisco & San Jose Railroad (SF&SJRR) Company incorporated in 1861, and the railroad connecting the two cities was completed in 1864. The SPRR bought out the SF&SJRR in 1868, around the same time that the owners of the Central Pacific Railroad, the "Big Four"—Leland Stanford, Collis Huntington, Charles Crocker, and Mark Hopkins—purchased the SPRR. The SF&SJRR was consolidated into the new SPRR in October 1870.

Rail Line Improvements

By 1890, rail traffic from San Francisco had increased to four trains daily to San Jose and points beyond, as well as three trains to Menlo Park and back each day. E. H. Harriman became president of the SPRR in 1901 and initiated extensive improvements to the rail line, including the construction of the Bayshore Cutoff in 1904. A new level route that more closely followed the then-shoreline of San Francisco Bay was needed between San Bruno and San Francisco to eliminate the steep grade through Bernal Cut. In October 1904, construction of the "Bayshore Cutoff" began under the name of Bayshore Railway, an SPRR-held company.

The construction of this line was a difficult undertaking, as 20 percent of the route consisted of tunnels. The cut at Visitacion Point, some 95 feet in depth, required removal of 750,000 cubic yards of material, which was used to fill in the inlet known as Visitacion Bay, north of the cut. The entire line was constructed with two main tracks, although it was designed to accommodate up to four tracks throughout the entire line, with the exception of four of the five tunnels. The line, which officially opened for service on December 8, 1907, shortened the distance between San Bruno and San Francisco by 4 miles, saving 17 minutes for commuters heading from San Jose to San Francisco.

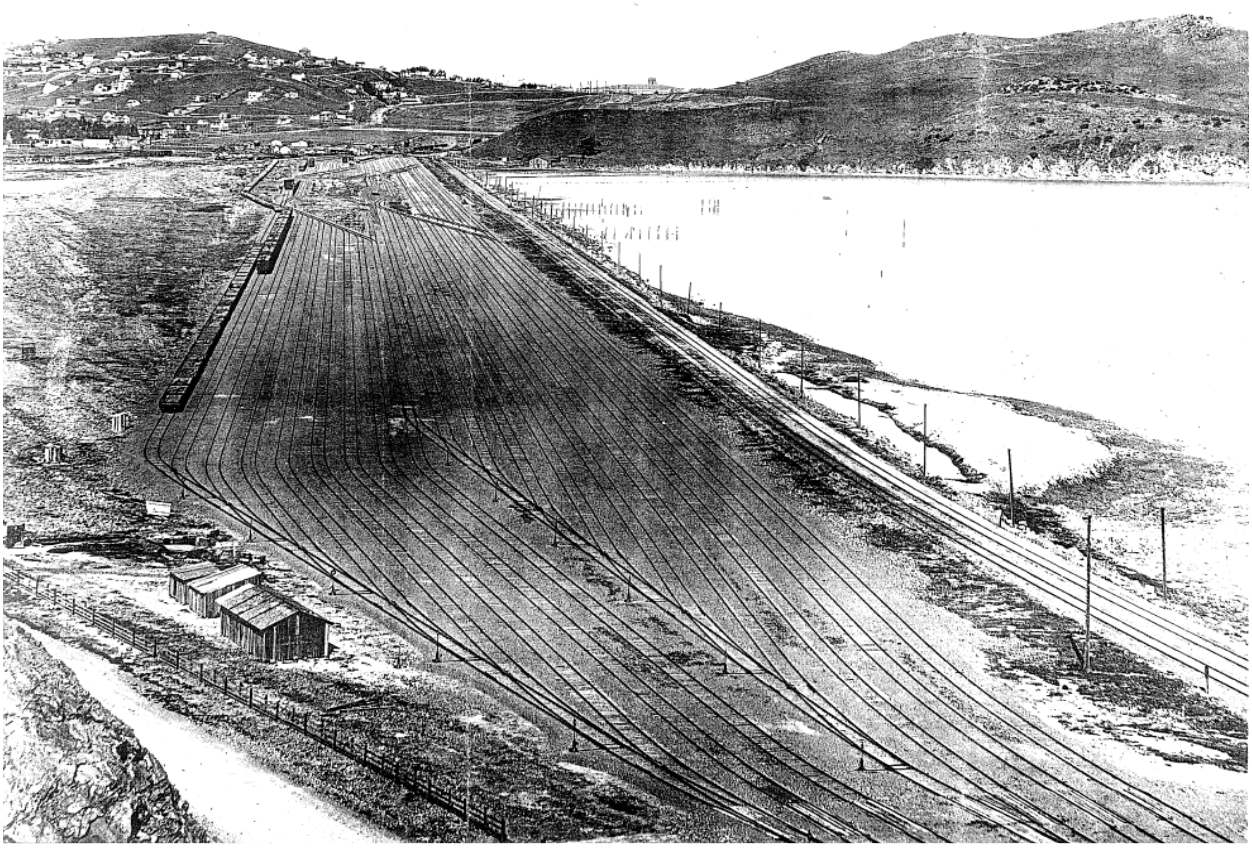
Building Construction

As part of the Bayshore Cutoff project, a modern freight terminal designed to replace the old machine shops in San Francisco at 16th and Harrison Streets and the car repair and roundhouse facilities at Mariposa Street on the old line was constructed on some 200 acres of fill at Visitacion Bay (see **Figure 4.7-3**). The new "Bayshore Yard," which was approximately 8,400 feet long, included a roundhouse, machine and car shops, and a hump.[139] The Roundhouse at

[139] A railroad "hump" is an artificially built hill that uses the force of gravity to propel the cars through the various switches in order to arrange them into various trains without having to use switch engines to guide the cars into place. The hump at Bayshore is no longer extant.

the Bayshore Yard was built circa 1907[140] to service freight locomotives. The former Tank and Boiler Shop at the Bayshore Yard was built in 1920 to maintain and repair the iron boilers on steam locomotives (Southern Pacific 1920).

Figure 4.7-3: View of Bayshore Railroad Yard from Bayshore Point, February 24, 1911



SOURCE: Collection of Ralph Domenici, sanfranciscotrains.org

The former Tank and Boiler Shop operated until the 1950s, and it was leased to the Lazzari Fuel Company in 1963 for use as a charcoal warehouse, a use that continued until the building was destroyed by fire in April 2024. The Visitacion Ice Manufacturing Plant, located at the southern end of the railroad yard, was constructed in 1924 as a Pacific Fruit Express Ice Manufacturing Plant to supply ice to the trains of the Pacific Fruit Exchange going in and out of San Francisco. The Visitacion Ice Manufacturing Plant was in operation between 1924 and 1955. Use of the building as an ice plant was discontinued in 1955. It currently houses Machinery & Equipment, Inc.

By 1950, approximately 75 other railroad maintenance shops and smaller structures had been constructed along the western edge of the railroad yard and clustered along Bayshore

[140] The Roundhouse first appears on a 1915 USGS Map, San Francisco and Vicinity. Earlier maps of the vicinity from 1905 identify the SPRR tracks across Visitacion Bay, but no other structures. As such, a "circa" date of 1907 is given for the construction of the Roundhouse.

Boulevard. These buildings included a machine shop, a powerhouse, a coach repair shop, a freight car repair shop, a lumber shed, a storage shed, loading platforms, a tower at the north end of the yard, and thousands of linear feet of rail spurs. A station plan from 1950 identifies the Bayshore Yard and many of its associated structures, including the Roundhouse.

By 1954, the SPRR had nearly completed the change from steam-powered locomotives to diesel power. In May 1954, heavy repair of steam locomotives ceased at the Bayshore Yard, and its shops were closed. Following its official closing, the Bayshore Yard remained busy for several years dismantling the now-defunct steam engines, and the yard became the major classification yard[141] for the San Francisco Terminal.

Use of the freight yard ceased in the 1960s, and the yard was predominantly idle at the time of its purchase in the late 1980s by Tuntex, now Universal Paragon Corporation. Caltrain took over the Union Pacific rail line in the 1980s, and by 1989, nearly all of the railroad spur tracks and numerous other maintenance shops and smaller support structures within the Baylands had been removed. The remaining railroad-related structures are described below. Also see **Figure 2-4**, which graphically depicts the development of the former rail yard site from 1915 to 1995.

Remaining Railroad-Related Structures

The only structures left standing today from the SPRR steam train era include the brick Roundhouse and the former Visitacion Ice Manufacturing Plant (currently Machine & Equipment, Inc.).

Roundhouse

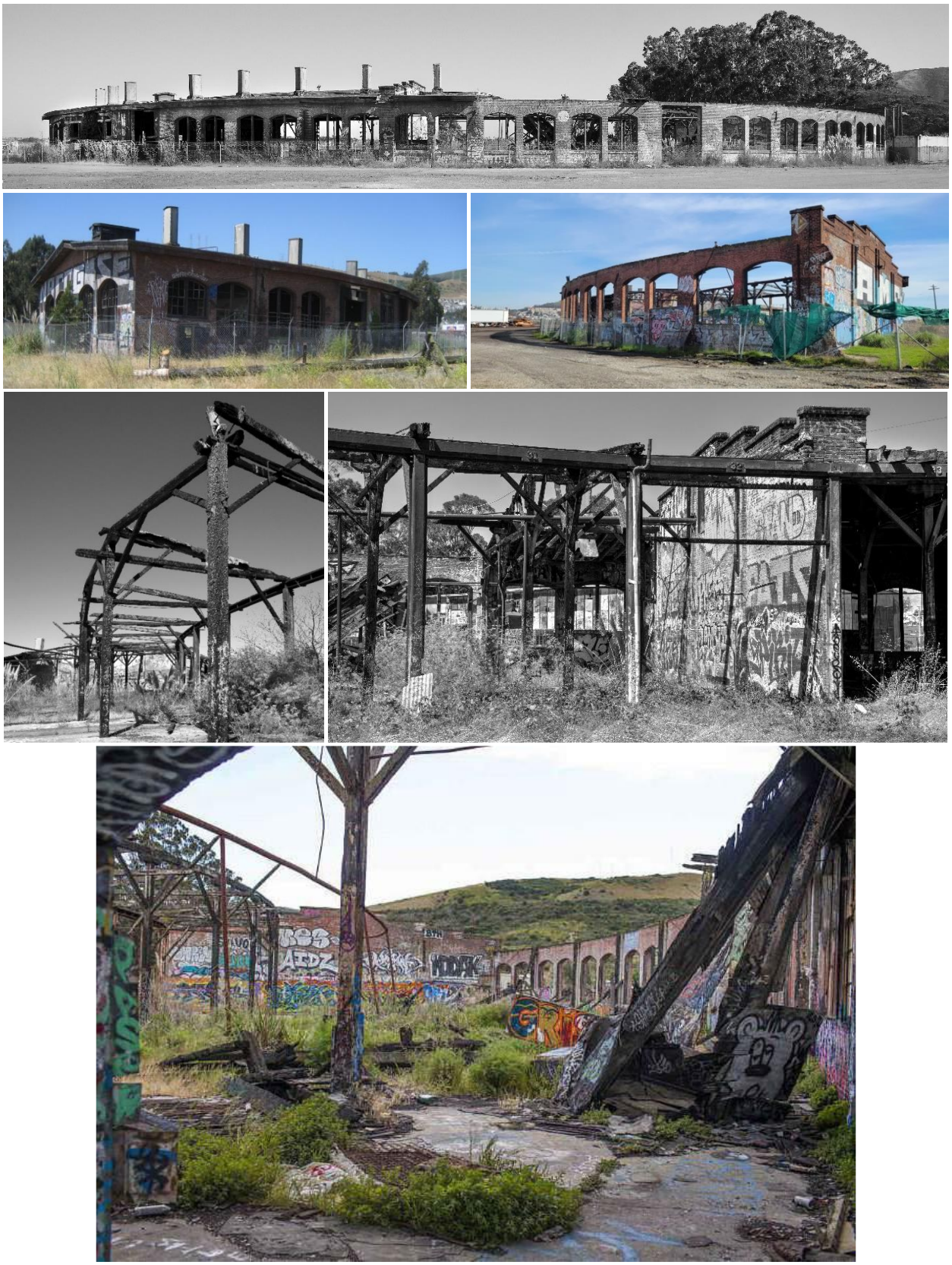
Designed by the SPRR and constructed circa 1907, the Roundhouse is a classic example of a railroad roundhouse, despite being significantly damaged by fire in recent years (**Figure 4.7-4**).

The roundhouse exemplifies brick roundhouses built by Southern Pacific Railroad in the late 19th and early 20th centuries to service and repair steam locomotives. Steam locomotives were last serviced in the Brisbane roundhouse in 1957. It is the only extant railroad roundhouse of the many that existed in California during the era of steam locomotives.

Built out of brick and heavy timber construction, the building's semi-circular plan reflects its function as a railroad roundhouse built to service the steam-powered locomotives of the day. Surrounding roughly 120 degrees of the pond that once contained the circular railroad turntable, the building consists of a curving shed wrapped on its exterior by a brick facade. The Roundhouse was built approximately 100 feet from the center of the turntable (no longer extant). The structure has a low-pitched roof with overhanging eaves and a continuous roof

[141] A "classification yard" is a type of railroad freight yard used to separate railroad cars onto one of several tracks.

Figure 4.7-4: Existing Roundhouse Building



monitor and ventilators along the ridge to allow heat, smoke, and steam to escape. On either end of the curved building, as well as at the building's center point, is a stepped brick parapet.[142] The building is approximately 24 feet tall at the roof's apex, tapering to about 18 feet at the lowest point. The brick facade is at least 18 inches thick, with arched openings consisting of five rows of soldier-course brickwork.[143]

The approximately 7-by-9-foot windows with arched headers run the length of the outside walls of the Roundhouse. The extant windows consist of wood framing with vertically proportioned small panes of glass. Doors and gates were made of heavy timber with externally expressed bracing and framing. A series of wood lamp posts arranged in a row extending from the southern end of the Roundhouse demarcate the location of additional spur lines where repair and maintenance of railroad engines also occurred. The western half of the building is severely fire-damaged, with portions of its roof missing, charred timbers, and missing or broken window frames. This abandoned building also shows evidence of vandalism and graffiti, despite the chain-link fencing that encircles the building.

EXTANT AND PARTIALLY EXTANT CHARACTER-DEFINING FEATURES

As part of the Baylands Bayshore Roundhouse Stabilization and Rehabilitation Plan undertaken by Page & Turnbull in 2020, a detailed analysis of extant (or partially extant) character-defining features was conducted. Extant or partially extant character-defining features of the Roundhouse that remain include:

- One-story, 108-degree curved massing
- Curved gable roof with metal smokestacks above each stall and monitor at east end
- Brick construction with wood interior framing
- Triangular parapet at east end wall
- Stepped brick parapet at south-facing end wall and central firewall
- Cast iron posts and lintels with stall numbers at the inner circumference
- Openings for 17 enclosed stalls at inner circumference (stalls 24 to 40)
- Fenestration pattern at outer circumference and end walls, featuring arched openings
- Wood barn doors with cross angles and metal hardware at outer circumference
- Rail tracks in each stall
- Concrete floor inside Roundhouse
- Drop pits between stalls 36 and 38

[142] A "parapet" refers to a low wall along the edge of a roof.

[143] "Soldier-course brickwork" refers to bricks laid vertically with the narrow side exposed.

- Wood partition with beaded wainscot between stalls 39 and 40
- Industrial metal gooseneck light fixtures
- Lighting poles at open stalls 1 through 23
- Circular concrete turntable pit

Character-defining features that are no longer present include:

- South portion of the curved roof and supporting wood structure
- Raised skylight and ventilation monitors along full length of roof
- Multi-lite wood sash double-hung windows with arched headers
- Central steel turntable
- Whisker tracks

CONDITIONS ASSESSMENT

Page & Turnbull staff visited the Roundhouse to undertake a conditions assessment. The materials and surrounding site of the Roundhouse were evaluated for their current level of deterioration and their expected future deterioration given the current condition.

Overall, the Roundhouse was found to be in fair material condition. One half of the structure sustained considerable damage due to fire, resulting in the loss of the wood structure, roof, and any remaining interior walls. The extant half of the building suffers from many roof leaks due to roofing material loss.

Brick and its original mortar, however, was found to be in good condition, though heavily defaced by many layers of graffiti. There are some major cracks through the brickwork, especially through window arch openings and at the south end wall. A section of the east end wall under one window opening is broken and missing. The south end wall is leaning out from the circumference walls. Mortar is likewise original and sound in most locations. It appears to be a portland cement-based mortar mix.

At the south end firewall, the inner wall's end parapet is detaching from its supports.

Windows and window sashes have all been removed, though frames and some casings remain. Window frames remain in most openings, though frames in the burned half of the building are heavily burned and/or partially lost. Remaining frames in the non-burnt end are in fair to poor condition, depending on their sun exposure.

Doors are in very poor condition or have been removed. Only one original oversized door remains. Stiles and panels are detaching from each other, and many elements are broken or damaged. Everything is heavily graffitied.

The primary structure of the Roundhouse consists of wood timbers between the brick firewalls. In the burned area, the posts and beams are in very poor condition where they remain in their original locations. Steel water pipes remain attached to the burned structure. In the unburnt section, timbers are in fair to good condition. Some columns have cutout sections or some insect damage at grade. Upper timbers show little deterioration beyond some water staining. A wood panel wall at the eastern-most bay remains intact but in poor condition. This wall is heavily graffitied and has damaged or removed sections.

Splits in the timbers are present. Other timber support beams have been chipped away for firewood.

The roof over the unburnt section of the Roundhouse is in poor condition. Roofing beams end at exposed rafter tails, some of which are broken or otherwise deteriorated from exposure. Wood fascia, soffit, and trim, once painted a dark brick red, line the edge of the roof. Many sections of the trim and soffit are split or detached. Bird nests appear in some of the openings.

Cast iron posts and lintels line the inner circumference of the Roundhouse. The steel is in fair condition with expected surface corrosion and graffiti. All stalls retain their cast numbers, even in the burnt section.

The interior floor of the Roundhouse is a concrete slab on grade. Much of the concrete slab is covered in dirt, volunteer plants, and debris. Pits remain below the Roundhouse stall tracks, though most are filled with dirt and/or debris.

Lazzari Charcoal Building (Former Southern Pacific Tank and Boiler Shop)

Originally used to maintain and repair the boilers on steam locomotives, the building now referred to as the "Lazzari Charcoal Building," which formerly housed the Lazzari Fuel Company, is located about 150 feet northwest of the Roundhouse. The Lazzari Charcoal Building has not been previously identified on any federal, state, or local registers of historical resources. This warehouse building, while historically associated with the SPRR, does not have sufficient historical or architectural significance to be considered individually eligible for listing under NRHP/CRHR criteria or as a City of Brisbane historical resource. The building was destroyed in a fire in April 2024 and has been removed from further discussion as a cultural resource.

Crocker Land Company

The Crocker Land Company, a subsidiary of Crocker Estate Company, owned properties throughout California (Oral History Associates, Inc. 1989). The owner of the Crocker Estate Company was Charles Crocker, founder of Crocker Bank (Oral History Associates, Inc. 1989). "Its San Mateo County holdings included all of the undeveloped property on San Bruno Mountain and a large tract of tidelands on the east side of the Bayshore Freeway" (Oral History Associates, Inc. 1989). "The town of Brisbane was almost completely surrounded by Crocker-owned property" (Oral History Associates, Inc. 1989).

Incorporation of the City of Brisbane

As development and annexation pressures from the surrounding communities of San Francisco to the north, Daly City to the northwest, and South San Francisco to the south increased over the 1950s, the citizens of the community considered incorporation. Development pressure was also felt from the SPRR, which occupied 600 acres of land to the east of the town, and the Crocker Land Company, a subsidiary of the Crocker Estate Company (Oral History Associates, Inc. 1989). Crocker Land Company announced the future development of an industrial park in the Guadalupe Valley, north of Brisbane, in the early 1950s that increased the threat of annexation as the development would need to be annexed into only one of the surrounding cities in order to provide services such as police, fire, water, and sewer (Oral History Associates, Inc. 1989). This announcement led to the formation of the Brisbane Citizens' Committee in the summer of 1953, which advocated for the incorporation of Brisbane (Oral History Associates, Inc. 1989). Following a failed vote for incorporation, the citizens of Brisbane voted in 1961 to incorporate a 2.5-square-mile area (Oral History Associates, Inc. 1989).

Annexation of the Baylands into Brisbane

The Baylands Specific Plan area was not included in the originally incorporated City of Brisbane. In the 1960s, due to its small population, Brisbane focused on developing an industrial tax base to fund the newly incorporated city, leading the City to consider annexation of properties east of Bayshore Boulevard. In December of 1952, both SPRR and PG&E, whose lands totaled 700 acres, requested annexation into Brisbane (Oral History Associates, Inc. 1989). Some of SPRR's lands extended into the Bay, including 8,350 acres of tidelands and Bay waters (Oral History Associates, Inc. 1989). In addition to the former SPRR railyard and former landfill, annexation of the Baylands site in 1962 included two lumberyards; industrial uses such as automobile service shops, hauling service companies, and suppliers of various goods along Industrial Way; and the Brisbane Lagoon.

Lumberyard Development

By the mid-1940s, the eastern portion of the Baylands had housed various industrial and commercial businesses. The Gamerston & Green Lumber Company, Mars Metal Company, and

Jones Hardwood Plywood Company are referenced on the 1946 Southern Pacific station plan of the Bayshore freight yard (Southern Pacific 1950). Van Arsdale Lumber appears for the first time on the 1962 Southern Pacific Bayshore-Visitacion station plan. Sierra Point Lumber and Plywood Company, now Golden State Lumber, appears to have been constructed more recently (circa 1965-1970).

Other Buildings within the Baylands

Other buildings in the southwestern portion of the Baylands that are not directly associated with the former use as a SPRR railyard include several warehouses along Industrial Way parallel to Bayshore Boulevard. This area once contained the Moore Building, a large, brick-clad, concrete-framed multi-storied factory building typical of early-20th-century industrial architecture, which was demolished in 1997. The 1950 railyard plan indicates that the Moore Building and other buildings in this area were owned by Consolidated Chemical Industries, a fertilizer company. Aside from the Moore Building, this area included about eight other industrial buildings: a fertilizer plant, a warehouse, a mill, a powerhouse, bone shed and bone storage, a glue works, and a hide and glue plant.[144] All of these previous uses appear to have been replaced by newer steel industrial warehouses, with the exception of the former "bone storage" building, a two-story concrete warehouse that appears to have been constructed circa 1945 and is located at the southwest end of Industrial Way. Current uses in this area include auto repair shops and warehouse uses.

f. Cultural Resources Records Search

The results of a records search at the Northwest Information Center of the California Historical Resources Information System (CHRIS) were received on January 25, 2023 (File No. 22-1116). The purpose of the records search was to: (1) determine whether known cultural resources have been recorded within or adjacent to the Baylands; (2) assess the likelihood for unrecorded cultural resources to be present based on historical references and the distribution of nearby sites; and (3) develop a context for the identification and preliminary evaluation of cultural resources. The records search consisted of an examination of the following documents:

- NCIC digitized base maps (USGS South San Francisco, California 7.5-minute topographic map), to identify recorded architectural resources (building, structures, and objects) within one-half mile of the Baylands Specific Plan area.
- Resource Inventories: *California Inventory of Historical Resources, California Historical Landmarks, Built Environment Resource Directory* (BERD; OHP 2023 (through March 2020),

[144] These buildings were likely used to manufacture glue and fertilizer from the bones of deceased cattle, possibly originating from the Cow Palace, about 1 mile northwest of this location (Bruce 2007).

and *Archaeological Determinations of Eligibility* (ADOE, as of April 2012) for San Francisco and San Mateo County.

The EIR's architectural historian consultant, ESA, reviewed the Historic Property Data File for San Mateo County for information on sites of recognized historical significance in the National Register of Historic Places, California Register of Historical Resources, California Inventory of Historic Resources, California Historical Landmarks, and California Points of Historical Interest.

ESA conducted a review of the following sources of historic maps and aerial photography: USGS topographic quadrangles (USGS 1892, 1915, 1939, 1943, 1947, 1956, 1969, 1975, 1981, 1993, 1999), U.S. Bureau of Land Management General Land Office (GLO) plat maps (GLO 1866), National Oceanic and Atmospheric administration T-Sheets (1854, 1932, 1944, 1953), and historic aerial photographs from historicaerials.com (NETR 1946, 1956, 1968, 1980, 1982). The review focused on the Baylands and its vicinity. Additional documents reviewed by ESA are listed in Section 4.7.7., References.

g. Identified Historic-Era Buildings and Structures

Architectural Resources Survey

ESA architectural historians completed a pedestrian survey on February 8, 2023, to document those historic-age buildings and structures within the Specific Plan area that had not been previously evaluated to determine whether these structures would meet the definition of a historic resource. Eight parcels, consisting of 11 buildings, were surveyed and documented:

- 21–27 Industrial Way (APN 005-310-120)
- 60–130 Industrial Way (APN 005-311-070)
- 131 Industrial Way (APN 005-312-100)
- 140–190 Industrial Way (APN 005-312-110)
- 151–171 Industrial Way (APN 005-311-100)
- 200 Industrial Way (APN 005-311-020)
- 250–256 Industrial Way (APN 005-311-010)
- 290–296, 300–312, 340–374, and 380 Industrial Way (APN 005-320-020)

An ESA architectural historian completed a second pedestrian survey on June 13, 2024. The purpose of this survey was to document additional historic-age buildings and structures within

the Project Area that had not been previously evaluated as potential historic resources. Eight parcels, consisting of 7 buildings, were surveyed and documented:

- 10 Industrial Way (APN 005-311-090)
- 36 Industrial Way (APN 005-311-120)
- 40 Industrial Way (APN 005-311-110)
- 2629–2635 Bayshore Boulevard (APN 005-340-110; 005-340-120)
- 595 Tunnel Avenue (APN 005-152-270)
- 601 Tunnel Avenue (APN 005-250-020)
- 950 Tunnel Avenue (APN 005-162-370)

ESA also revisited the recorded location of the South San Francisco Overhead, which was mapped by the NWIC as being within the Specific Plan area, the locally listed Machinery & Equipment Building, and the SPRR Bayshore Roundhouse and Turntable Pit, which is listed on the National Register and eligible for the California Register.

In addition, ESA reviewed the Roundhouse Stabilization and Rehabilitation Plan to determine whether it was consistent with the Secretary of the Interior's Standards for Rehabilitation, which are designed to protect those physical characteristics of a historical resource that convey its historical significance.

Architectural Resources Evaluations

Buildings that were not previously recorded as historical resources, as well as the former freight yard as a whole, were evaluated for their potential historical significance by applying the federal and state criteria for listing, which are defined in Subsection 3.6.2, *Relevant Plans, Programs, and Policies*. **Table 4.7-1** shows whether these buildings are considered "historical resources" under the CEQA Guidelines definition. In total, ESA reviewed three previously identified historical resources and 15 newly identified historic-age resources.

Three resources—P-38-005131, P-41-002721, and the SPRR Bayshore Roundhouse and Turntable—are recommended or determined eligible either locally or for the California Register and are therefore treated as significant historical resources. All other resources in the Specific Plan area are recommended or determined not eligible for the California Register and are not historical resources.

Table 4.7-1: Historical Significance of Resources within or adjacent to the Baylands

Current Name/Description	Historic Name/Use	Eligibility
Roundhouse	Former Southern Pacific Roundhouse turntable pit remain	Listed on the National Register and eligible for the California Register.
Machinery & Equipment Building	Former Pacific Fruit Express Ice Manufacturing Plant	Adjacent to Specific Plan area. Considered in the Brisbane Baylands Program EIR to be a "historical resource" as defined by CEQA Guidelines Section 15064.5(a).
P-41-002721 South San Francisco Overhead/ Bayshore/Crocker Tunnel	Concrete arch tunnel	Determined not eligible for the National Register. Locally listed and considered a historical resource.
21–27 Industrial Way	Industrial building	Recommended not eligible for the California Register.
60–130 Industrial Way	Industrial building	Recommended not eligible for the California Register.
131 Industrial Way	Industrial building	Recommended not eligible for the California Register.
151 Industrial Way	Industrial building	Recommended not eligible for the California Register.
140–190 Industrial Way	Industrial building	Recommended not eligible for the California Register.
200 Industrial Way	Industrial building	Recommended not eligible for the California Register.
250–256 Industrial Way	Industrial building	Recommended not eligible for the California Register.
290–294, 300–312, 340–374, and 380 Industrial Way	Industrial buildings	Recommended not eligible for the California Register.
10 Industrial Way	Industrial building	Recommended not eligible for the California Register
36 Industrial Way	Public utility building	Recommended not eligible for the California Register
40 Industrial Way	Industrial building	Recommended not eligible for the California Register
2629–2635 Bayshore Boulevard	Commercial building	Recommended not eligible for the California Register
595 Tunnel Avenue	Industrial building	Recommended not eligible for the California Register
601 Tunnel Avenue	Industrial Building	Recommended not eligible for the California Register
950 Tunnel Avenue	Industrial building	Recommended not eligible for the California Register

SOURCE: ESA, 2013, 2023, 2024.

h. Identified Archaeological Resources

Archaeological Resources Survey

ESA archaeologists conducted spot checks of the four previously recorded archaeological resources within and adjacent to the Specific Plan area on February 7, 2023. Since the surface of the Specific Plan area is either fill or has been completely disturbed with the deconstruction of the SPRR Bayshore yard, the landfill, and the construction of other buildings, the pedestrian survey focused on relocating known sites and getting a general idea of the surficial soils of the Project Area. Specifically, the locations of P-38-005131, P-41-002160, P-41-002395, and P-41-002706 were inspected to determine if there had been any change to these resources from their last recording and to confirm that the resources were recorded and described in the correct locations. P-38-005131 and P-41-002395 were determined to be outside of the Specific Plan area.

P-41-002160 – FT-2. This resource is a scatter of historic-era artifacts identified in the southeastern portion of the Specific Plan area. The resource includes glass and ceramic fragments dating to the late 19th and early 20th centuries. Historic-era material was identified around the vegetation in the northern portion of the site within what appears to be a push pile. Previous evaluation and concurrence from the SHPO identified the resource as not eligible for the National Register or the California Register; therefore, this resource is not considered a historical resource.

P-38-005131 – Schlage Lock/Ralston Mound.[145] This resource has two components: a pre-contact habitation site with midden and burials, known as the Ralston Shellmound, and the historic-era remains of the Union Pacific Silk Manufacturing Company.[146] California Department of Parks and Recreation documentation for this resource does not show that it extends into the Specific Plan area; however, recent coring by PaleoWest (Alonso, Zingerella, and Johnson 2022) found midden within the Specific Plan area that likely is associated with the pre-contact component of P-38-005131. The pre-contact component of the resource consists of what was likely two shellmounds.

Based on the previous work on the resource for the Visitacion Valley Redevelopment Program[147] and due to the presence of human remains, this resource was recommended eligible for listing in the California Register under Criterion 1 (for its association with historical events) and Criterion 4 (for its data potential) and is therefore considered a historical resource.

i. Archaeological Sensitivity Analysis

Based on the soil type and bedrock present at the surface of the Baylands, the potential for previously unrecorded surficial pre-contact archaeological deposits is low. Any surficial pre-contact cultural material would likely be encountered in a redeposited, disturbed context due to the Specific Plan area being primarily artificial fill at the surface.

However, the context for buried pre-contact archaeological deposits is more complex. The natural topography and bathymetry in the Specific Plan area, prior to historic-era land reclamation efforts, sloped downward toward the San Francisco Bay. Sea level, and therefore the level of San Francisco Bay, was dramatically lower when humans first arrived in the area. Human occupation may have occurred 10,000 years ago when the Bay was much shallower,

[145] "Schlage Lock/Ralson Mound" is the formal name given to this resource. It is a multi-component resource, including the historic-era and pre-contact archaeological materials. Multi-component resources are considered as a whole, even if certain components (such as the Schlage Lock building) are outside of the Baylands.

[146] As currently understood, the historic-era component of this resource is outside of the Baylands. However, other components of this resource are within the Baylands. California Historical Resources Information System (CHRIS) multi-component sites are considered as a whole, even if certain components are outside of the Baylands.

[147] Although the Baylands site is not part of the Visitacion Valley Redevelopment Program, previous work completed for that program is relevant to archaeological background knowledge of the Baylands area and explains the context in which the resource was previously evaluated.

and the bay shore was further east of the historic shore at Bayshore Boulevard. Therefore, there is the potential that there are intact sites at depth below the historic-era fill within the Baylands (see **Figure 4.7-1**).

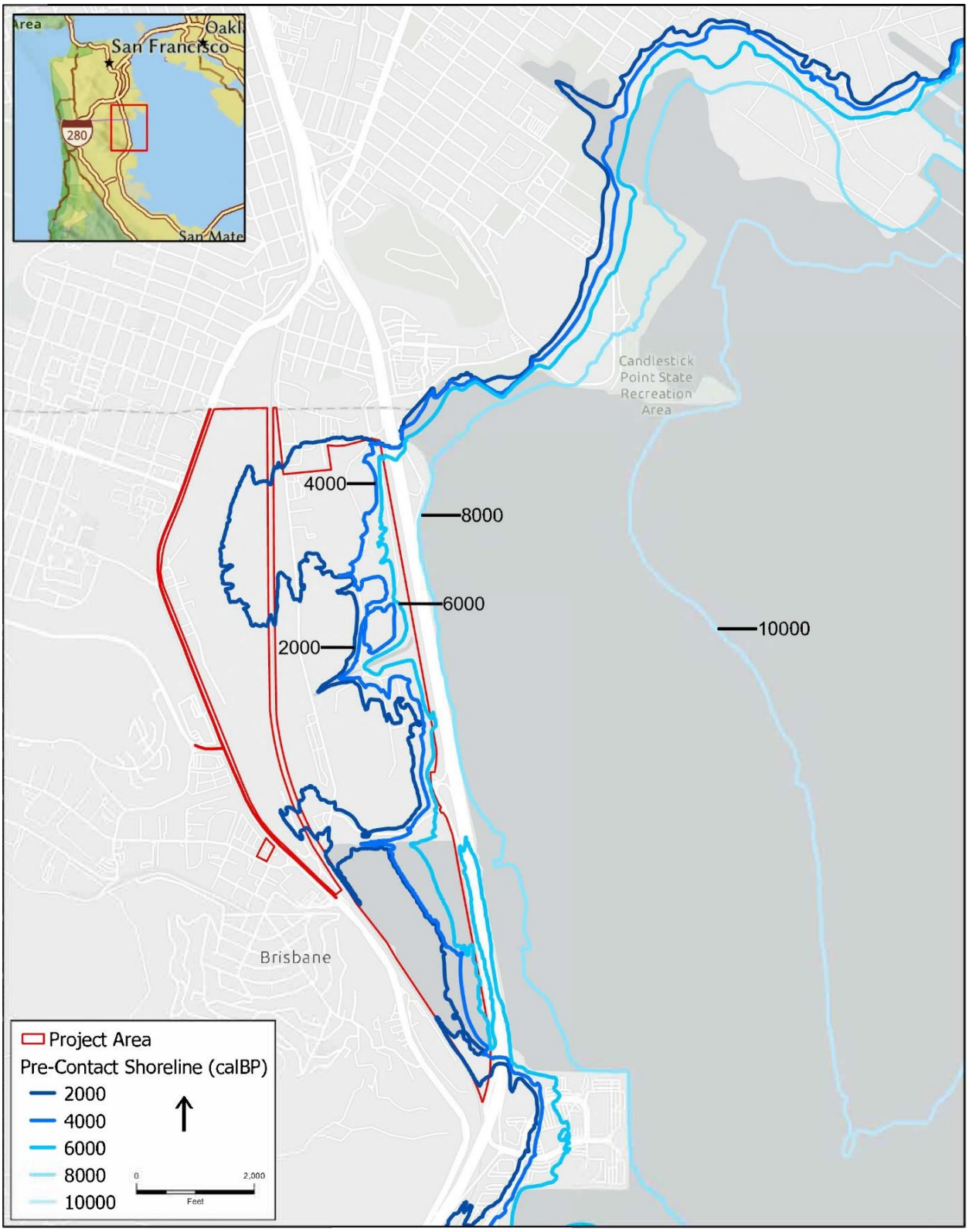
Archaeologically sensitive buried landforms include land surfaces that lay exposed after the postulated date of arrival of humans in this area during the terminal Pleistocene (possibly as much as 10,000 to 12,000 years ago), and were subsequently inundated by rising seas during the Early (11,550 to 7,650 years before present [BP]) and Middle Holocene (7,650 to 3,750 BP) and buried by sediments, such as Young Bay Mud, as the sea level rose.

Approximately 12,000 years BP, a warming climate trend caused global sea level to rise rapidly with the melting of ice associated with glaciation; by 10,000 years BP, rising sea level had connected the bay with the Pacific Ocean and established estuary conditions (**Figure 4.7-5**). Approximately 8,000 years BP, the Bay shoreline was approximately just east of the Highway 101 alignment. Combined with rising water levels, increased sedimentation into streams and rivers resulted in the formation of marshes and tidal flats during the mid-Holocene (Helley et al. 1979). By 2,000 years BP, the Bay had inundated the eastern half of the Specific Plan area, much of which had formed into tidal marshlands. The main high points above the water in the Specific Plan area would have been at Icehouse Hill. As sea level rose, any potential archaeological deposits that formed when the area was previously accessible for human occupation would have been covered with tidal and bay deposits, both submerging and burying the deposits. Land reclamation efforts in the late 1800s and 1900s are unlikely to have disturbed these deposits if they had been sufficiently buried by estuarine and tidal deposits.

This analysis is corroborated by the pre-contact sensitivity model developed by Far Western Anthropological Research Group, which covers parts of the Specific Plan area and indicated low to very high sensitivity for buried resources, with increasing sensitivity in a landward direction (Meyer and Brandy 2019). In addition, midden soils identified by PaleoWest during coring within the northwest portion of the Specific Plan area in 2022 may represent intact, buried archaeological deposits that confirm this sensitivity assessment (Alonso, Zingerella, and Johnson 2022). Alternatively, this material could represent redeposited midden from P-41-005131 that had eroded into the tidal marsh or was disturbed as part of land reclamation in the Specific Plan area.

While the slope of the pre-contact shoreline is sensitive for pre-contact resources, it is unlikely to be affected by the Specific Plan east of the Caltrain right-of-way, where the pre-contact shoreline would be significantly deeper than the landfill and below Bay Mud sediments that were deposited as the shoreline rose with sea level. The exact depth of soils that are sensitive for pre-contact resources varies throughout the Specific Plan area as the exact slope of the pre-contact shoreline is unknown.

Figure 4.7-5: Pre-European Contact Shoreline



SOURCE: ESA, 2024; Esri, 2024

4.7.3 REGULATORY CONTEXT FOR BAYLANDS DEVELOPMENT

a. Federal Laws Plans, Programs, and Regulations

National Historic Preservation Act of 1966

The National Historic Preservation Act of 1966 (NHPA) established the National Register of Historic Places (National Register), which is the official register of designated historic places. The National Register is administered by the National Park Service, and includes listings of buildings, structures, sites, objects, and districts that possess historical, architectural, engineering, archaeological, or cultural significance at the national, state, or local level.

To be eligible for the National Register, a property must be significant under one or more of the following criteria pursuant to 36 Code of Federal Regulations Part 60:

A. Properties that are associated with events that have made a significant contribution to the broad patterns of our history;

B. Properties that are associated with the lives of persons significant in our past;

C. Properties that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

D. Properties that have yielded, or may be likely to yield, information important in prehistory or history.

In addition to meeting one or more of the aforementioned criteria, an eligible property must also possess historic "integrity," which is "the ability of a property to convey its significance." The National Register criteria recognize seven qualities that define integrity: location, design, setting, materials, workmanship, feeling, and association.

Structures, sites, buildings, districts, and objects over 50 years of age can be listed in the National Register as significant historical resources. Properties under 50 years of age that are of exceptional importance or are contributors to a district can also be included in the National Register. Properties listed in or eligible for listing in the National Register are also eligible for listing in the California Register of Historic Resources (described below), and as such, are considered historical resources for CEQA purposes.

Secretary of the Interior Standards for the Treatment of Historic Properties

The purpose of The Secretary of the Interior's Standards for the Treatment of Historic Properties (36 CFR Part 68) is to provide guidance to historic building owners and building managers,

preservation consultants, architects, contractors, and project reviewers. These Standards consisting of four treatment standards—Preservation, Rehabilitation, Restoration, and Reconstruction—are intended as general guidance for work on all historic properties for use at the federal, state, and local levels and are regulatory for certain federal actions.[148]

As stated in the regulations (36 CFR Part 68), "one set of standards … will apply to a property undergoing treatment, depending upon the property's significance, existing physical condition, the extent of documentation available, and interpretive goals, when applicable. The Standards will be applied taking into consideration the economic and technical feasibility of each project." The Standards apply not only to historic buildings but also to a wide variety of historic resource types eligible to be listed in the National Register of Historic Places, including buildings, sites, structures, objects, and districts.

The Standards include four sections, each focusing on one of the four treatment Standards: Preservation, Rehabilitation, Restoration, and Reconstruction.

- **Preservation** is defined as the act or process of applying measures necessary to sustain the existing form, integrity, and materials of an historic property. Work, including preliminary measures to protect and stabilize the property, generally focuses upon the ongoing maintenance and repair of historic materials and features rather than extensive replacement and new construction. The limited and sensitive upgrading of mechanical, electrical, and plumbing systems and other code-required work to make properties functional is appropriate within a preservation project. However, new exterior additions are not within the scope of this treatment. The Standards for Preservation require retention of the greatest amount of historic fabric along with the building's historic form.
- **Rehabilitation** is defined as the act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features which convey its historical, cultural, or architectural values. The Rehabilitation Standards acknowledge the need to alter or add to a historic building to meet continuing or new uses while retaining the building's historic character.
- **Restoration** is defined as the act or process of accurately depicting the form, features, and character of a property as it appeared at a particular period of time by means of the removal of features from other periods in its history and reconstruction of missing features from the restoration period. The limited and sensitive upgrading of mechanical, electrical, and plumbing systems and other code-required work to make properties functional is appropriate within a restoration project. The Restoration Standards allow for the depiction

[148] The Standards codified in 36 CFR Part 68 are regulatory for all grant-in-aid projects assisted through the national Historic Preservation Fund. The Standards codified in 36 CFR 67 are regulatory for the review of rehabilitation work in the Historic Preservation Tax Incentives program.

of a building at a particular time in its history by preserving materials, features, finishes, and spaces from its period of significance and removing those from other periods.

- **Reconstruction** is defined as the act or process of depicting, by means of new construction, the form, features, and detailing of a non-surviving site, landscape, building, structure, or object for the purpose of replicating its appearance at a specific period of time and in its historic location. The Reconstruction Standards establish a limited framework for recreating a vanished or non-surviving building with new materials, primarily for interpretive purposes.

b. State Laws, Plans, Programs, and Regulations

California Register of Historic Places

The California Register is "an authoritative listing and guide to be used by state and local agencies, private groups, and citizens in identifying the existing historical resources of the state and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change" (PRC Section 5024.1[a]). The criteria for eligibility for the California Register are based upon the criteria for listing in the National Register of Historic Places (National Register) (PRC Section 5024.1[b]), as defined above. Certain resources are determined by the statute to be automatically included in the California Register, including California properties formally determined eligible for, or listed in, the National Register.

To be eligible for the California Register, a cultural resource must be significant at the local, state, and/or federal level under one or more of the following four criteria:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
2. Is associated with the lives of persons important in our past;
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
4. Has yielded, or may be likely to yield, information important in prehistory or history.

A resource eligible for the California Register must be of sufficient age and retain enough of its historic character or appearance (integrity) to convey the reason for its significance. Additionally, the California Register consists of resources that are listed automatically and those that must be nominated through an application and public hearing process. The California Register automatically includes the following:

- California properties listed on the National Register and those formally determined eligible for the National Register;

- California Registered Historical Landmarks from No. 770 onward; and
- Those California Points of Historical Interest that have been evaluated by the OHP and have been recommended to the State Historical Commission for inclusion on the California Register.

Other resources that may be nominated to the California Register include:

- Historical resources with a significance rating of Category 3 through 5 (those properties identified as eligible for listing in the National Register, the California Register, and/or a local jurisdiction register);
- Individual historic resources;
- Historic resources contributing to historic districts; and
- Historic resources designated or listed as local landmarks, or designated under any local ordinance, such as an historic preservation overlay zone; and
- Tribal Cultural Resources.

Public Resources Code Sections 5079 and 5097

Archaeological, paleontological, and historical sites are protected pursuant to a variety of state policies and regulations enumerated under the California Public Resources Code. In addition, cultural and paleontological resources are recognized as non-renewable and therefore receive protection under the California Public Resources Code and CEQA. The following California Public Resources Code sections apply to activities related to this project:

- **Public Resources Code Sections 5079–5079.65** define the functions and duties of the Office of Historic Preservation (OHP). The OHP is responsible for the administration of federal- and state-mandated historic preservation programs in California and the California Heritage Fund.
- **Public Resources Code Section 5097** provides procedures to be followed in the event of the unexpected discovery of human remains on non-federal land.
    - **Section 5097.5** of the code states as follows: "No person shall knowingly and willfully excavate upon, or remove, destroy, injure, or deface any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over such lands. Violation of this section is a misdemeanor. As used in this section, 'public lands' means lands owned by, or under the jurisdiction of, the state or any city, county, district, authority or public corporation, or agency

thereof." Consequently, Baylands development is required to comply with Public Resources Code Section 5097.5 because it is within the City's jurisdiction.

- **Sections 5097.9–5097.991** provide protection to Native American historical and cultural resources and sacred sites and identify the powers and duties of the Native American Heritage Commission (NAHC). It also requires notification to descendants of discoveries of Native American human remains and provides for treatment and disposition of human remains and associated grave goods.

California Senate Bill 18

Senate Bill 18 (SB 18) (California Government Code Section 65352.3) sets forth requirements for local governments to consult with Native American tribes to aid in the protection of traditional tribal cultural places through local land use planning. The intent of SB 18 is to provide California Native American tribes an opportunity to participate in local land use decisions at an early stage of planning for the purpose of protecting, or mitigating impacts on, cultural places. The Tribal Consultation Guidelines: Supplement to General Plan Guidelines (OPR 2005) identifies the following contact and notification responsibilities of local governments:

- Prior to the adoption or any amendment of a general plan or specific plan, a local government must notify the appropriate tribes (on the contact list maintained by the Native American Heritage Commission [NAHC]) of the opportunity to conduct consultations for the purpose of preserving, or mitigating impacts to, cultural places located on land within the local government's jurisdiction that is affected by the proposed plan adoption or amendment. Tribes have 90 days from the date on which they receive notification to request consultation unless a shorter timeframe has been agreed to by the tribe (Government Code Section 65352.3).
- Prior to the adoption or substantial amendment of a general plan or specific plan, a local government must refer the proposed action to those tribes that are on the NAHC contact list and have traditional lands located within the city or county's jurisdiction. The referral must allow a 45-day comment period (Government Code Section 65352). Notice must be sent regardless of whether prior consultation has taken place. Such notice does not initiate a new consultation process.
- Local government must send a notice of a public hearing, at least 10 days prior to the hearing, to tribes who have filed a written request for such notice (Government Code Section 65092).

Because the proposed project requires a General Plan Amendment and a Specific Plan Amendment, it is subject to the statutory requirements of SB 18 Tribal Consultation Guidelines. The City contacted the NAHC with the Notice of Preparation for this EIR and informational letters were sent to each tribe identified on the NAHC's list.

California Assembly Bill 52

Assembly Bill 52 (AB 52), which became effective in January 2016 as Public Resources Code Section 21080.3.1, established a new category of resources in CEQA called "tribal cultural resources" that considers "tribal cultural values in addition to scientific and archaeological values when determining impacts and mitigation."[149] Tribal cultural resources are defined as "sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe" that are either included or determined to be eligible for inclusion in the California Register of Historical Resources or local registers of historical resources.

AB 52 implemented a new consultation process, in which lead agencies are required to offer Native American tribes that are traditionally and culturally affiliated with the project area and that have submitted written requests the opportunity to participate in consultations to protect tribal cultural resources. Pursuant to AB 52, lead agencies are required to provide formal notice to the tribes requesting to participate within 14-days of the lead agency's determination that an application package is complete. Tribes have 30 days to respond to request consultation on the project.

Health and Safety Code Section 7052

Section 7052 of the California Health and Safety Code makes the willful mutilation, dis-internment, or removal of human remains a felony. Section 7052.5 requires that any construction or excavation be stopped in the vicinity of discovered human remains until the coroner can determine whether the remains are those of a Native American. If the remains are determined to be Native American, the coroner must contact the NAHC.

California Native American Historic Resource Protection Act

This California Native American Historic Resources Protection Act of 2002 imposes civil penalties, including imprisonment and fines up to $50,000 per violation, for persons who unlawfully and maliciously excavates upon, removes, destroys, injures, or defaces a Native American historic, cultural, or sacred site that is listed or may be listed in the California Register.

Health and Safety Code Section 7050.5(b)

California Health and Safety Code Section 7050.5(b) specifies protocols when human remains are discovered. Specifically, burials or human remains found inside or outside of a known cemetery are not to be disturbed or removed unless by authority of law, and the area of a discovery of human remains should remain undisturbed until a County coroner is notified and has examined the remains prior to determining the appropriate course of action. Public

[149] Assembly Bill 52 Section 1 (b)(2).

Resources Code Section 5097.98 (reiterated in CCR Section 15064.59 [e]) also identifies steps to follow in the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery.

c. City of Brisbane Plans, Ordinances, and Regulations

General Plan

The Brisbane General Plan contains the following policies and programs applicable to Baylands development that are intended to protect cultural resources.

Chapter IX: Conservation Element

Policy 136: Encourage the maintenance and rehabilitation of structures important to the history of Brisbane.

Program 136a: Provide assistance to owners of historic property in planning rehabilitation projects.

Program 136b: Provide information to property owners on loan and grant funds and tax incentives.

Program 136c: Provide local incentives, such as the Brisbane Star awards, to maintain historic places.

Policy 137: Conserve prehistoric resources in accordance with State and Federal requirements.

Chapter XII: Policies by Subarea

Policy BL.1 I: The historic Roundhouse shall be protected and preserved. The required specific plan shall ensure rehabilitation of the Roundhouse for adaptive reuse at the developer's cost.

4.7.4 RELEVANT SPECIFIC PLAN PROVISIONS

To restore the Roundhouse and ensure it is protected from flooding and sea level rise, the Specific Plan proposes severing the Roundhouse structure from its existing concrete slab, lifting the building, and setting it down on a new concrete slab supported by new stem walls and compacted fill following site grading to achieve a pad elevation protected from sea level rise and flooding. The Specific Plan includes adaptive reuse of the historic Roundhouse within a 3.5-acre circular park echoing the building's form, preserving the unique character of this railroad building typology. The proposed adaptive reuse program provides for a community center,

railroad museum, café, and open-air theater in conformance with the Secretary of Interior's Standards for Rehabilitation. In addition, the Specific Plan proposes interpretive design and choice of landscape materials and features that help tell the story of how the turntable pit, "whisker tracks" emanating from the turntable, and other features contributed to the historic use of the Roundhouse. The Roundhouse Restoration Plan can be found in EIR Appendix E.2.

4.7.5 SIGNIFICANCE CRITERIA

As discussed in Section 4.1.3, the following criteria were used to determine the significance of cultural resources and tribal cultural resources impacts.

Threshold CUL-1: **The Baylands Specific Plan would cause a significant impact due to a substantial adverse change in the significance of a historic building or structure that is a historical resource as defined in CEQA Guidelines §15064.5 if it would:**

- **Exacerbate the decline of the remaining structural integrity of the Roundhouse by allowing continued deterioration and vandalism;**
- **Fail to provide for rehabilitation of the Roundhouse consistent with the performance standards contained in the following documents:**
  - **The Secretary of the Interior's Standards for Rehabilitation, providing for retention of significant, character-defining features of the building while finding a new use for the structure that is compatible with its historic character;**
  - **The National Park Service's *Preservation Brief #17, Identifying the Visual Aspects of Historic Buildings as an Aid to Preserving Their Architectural Character*; and**
  - **The National Park Service's *Preservation Brief #18, Rehabilitating Interiors in Historic Buildings - Identifying and Preserving Character-Defining Elements.***
- **Impair the historic integrity of the Roundhouse or the Machinery & Equipment building by placing or designing new structures adjacent to these buildings that would overwhelm or unnecessarily contrast with these historic buildings as the result of inappropriate heights, volumes, and materials.**

Threshold CUL-2: The Baylands Specific Plan would cause a significant impact to an archaeological resource (either a historical resource as defined in CEQA Guidelines §15064.5(a) or a unique archaeological resource as defined in Public Resources Code §21083.2) if it would:

- **Disturb, damage, or degrade a known or previously unknown archaeological resource; or**
- **Disturb the contextual setting of a known or previously unknown archaeological resource.**

Threshold CUL-3: The Baylands Specific Plan would cause a significant impact if it would disturb, damage, or degrade either a tribal cultural resource, as that term is defined in Public Resources Code Section 21074, or the contextual setting of such a resource, resulting in a substantial loss of the resource's cultural value.

Threshold CUL-4: The Baylands Specific Plan would cause a significant impact if known or unknown human remains would be disturbed in a manner inconsistent with the provisions of the California Health and Safety Code Sections 7050.5(b) and Section 7052.5, and the Public Resources Code Section 5097.98.

4.7.6 PROJECT IMPACTS AND MITIGATION MEASURES

a. Impact CUL-1: Substantial Adverse Change in the Significance of a Historic Building or Structure

Methodology for Determining Significance

Impacts on historic architectural resources were assessed by determining whether Baylands development would demolish or materially alter in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register of Historical Resources. If such Baylands development actions would occur, impacts were determined to be significant. If such actions would not occur or Baylands development would demolish or materially alter buildings or structures that were not determined to be significant historical resources, such actions were determined to have a less-than-significant impact or no impact.

Impact Assessment

As documented in the Cultural Resources Technical Report (Draft EIR Appendix E), three historic-era architectural resources: Machinery & Equipment Building, South San Francisco Overhead, and the SPRR Bayshore Roundhouse and Turntable are recommended or determined eligible for the California Register and are treated as historical resources for the purposes of the Specific Plan. All other architectural resources in the Project Area (21–27 Industrial Way, 60–130 Industrial Way, 131 Industrial Way, 140-160 Industrial Way, 151–171 Industrial Way, 200 Industrial Way, 250–256 Industrial Way, and 290–296, 300–312, 340–374, and 380 Industrial Way, 10 Industrial Way, 36 Industrial Way, 40 Industrial Way, 2629–2635 Bayshore Boulevard, 595 Tunnel Avenue, 601 Tunnel Avenue, and 950 Tunnel Avenue) are recommended or determined not eligible for the California Register and are not historical resources. The Lazzari Charcoal Building/SPRR Tank and Boiler Shop was destroyed in a fire in April 2024 and was not further considered as a cultural resource in this analysis.

Machinery & Equipment Building/Visitacion Ice Manufacturing Plant

As described above, the Program EIR identified the Machinery & Equipment Building (P-41-002720) as an existing historical resource per the City of Brisbane General Plan. The Program EIR determined that project development could potentially cause an adverse effect to the building through changes to its historic setting, and recommended implementation of design guidelines to ensure that new development be compatible with the historic structure (including 50-foot setbacks, and appropriate height/volume/and material). The introduction of new, visually incompatible construction within the immediate vicinity of the Machinery & Equipment Building could cause a significant impact to the building's historic setting. The current Project, however, includes open space in the area surrounding the Machinery & Equipment Building (P-41-002720), and, as such, would not introduce new development in proximity to the building that could adversely affect its historic setting.

South San Francisco Overhead/Bayshore/Crocker Tunnel

The South San Francisco Overhead (P-41-002721) is a former SPRR tunnel located beneath Bayshore Boulevard that once connected the freight yard to today's Crocker Business Park with a single-track railroad spur, previously determined not eligible for the National Register (OHP 2023). However, the Program EIR identified this resource as a locally eligible historical resource and determined that project development of pedestrian and bicycle access through this former railroad tunnel would not physically alter the tunnel structure and would have no significant direct or indirect impact on the railroad tunnel as a historical resource. Similarly, the current Specific Plan does not propose any physical alterations of the tunnel through vibration or changes to the setting and would likewise not result in direct or indirect adverse effects to the tunnel as a historical resource.

Roundhouse

Since a devastating fire, the abandoned Roundhouse building has been exposed to the elements, which have hastened its deterioration. It has also become an attractive nuisance for vandalism, which may further hasten its deterioration and/or make it vulnerable to another fire.

The Specific Plan provides for rehabilitation of the Roundhouse and its adaptive reuse, consistent with National Parks Briefs #17 (*Identifying the Visual Aspects of Historic Buildings as an Aid to Preserving Their Architectural Character*) and #18 (*Rehabilitating Interiors in Historic Buildings – Identifying and Preserving Character-Defining Elements*). The Specific Plan's land use plan places the Roundhouse within a 3.5-acre circular park echoing the building's form, preserving the unique character of this railroad building typology. The proposed adaptive reuse program provides for a community center, railroad museum, café, and open-air theater in conformance with the Secretary of Interior's Standards for Rehabilitation. In addition, the Specific Plan proposes interpretive design and choice of landscape materials and features that help tell the story of how the turntable pit, "whisker tracks" emanating from the turntable, and other features contributed to the historic use of the Roundhouse.

To restore the Roundhouse and ensure it is protected from flooding and sea level rise, the Specific Plan proposes severing the Roundhouse structure from its existing concrete slab, lifting the building, and setting it down upon a new concrete slab supported by new stem walls and compacted fill following site grading to achieve a pad elevation protected from sea level rise and flooding (Page & Turnbull 2020). The stabilization and restoration of the Roundhouse would occur in five increments:

- **Safety and Security:** The initial increment of Roundhouse stabilization and rehabilitation would include fencing the site, installing security measures to prevent unwanted access, mitigating imminent hazards, and removal of pests and plants.
- **Initial Stabilization:** Once security measures have been installed and imminent hazards have been mitigated, the applicant proposes temporarily "mothballing" the Roundhouse to prevent further damage and deterioration. This would include protecting the structure from further moisture penetration and plant and pest infestation, as well as stabilizing the structural components against wind and seismic forces. These stabilization measures are expected to be in place for 2 to 3 years.
- **Raising the Building and Re-Grading the Site:** In response to expected sea level rise, the Roundhouse site would be raised, and the structure would be lifted or deconstructed piece-by-piece and reconstructed at a higher elevation on a new foundation. Comprehensive materials testing would be undertaken prior to lifting or deconstructing the Roundhouse to inform the strategy for subsequent restoration and retrofit.
- **Second Stabilization:** After the site has been raised, a new foundation would be constructed, and the Roundhouse structure would be connected to or re-built atop the

new foundation. Some portion of the final retrofit would be installed at this time to stabilize the structure, such as columns that need to be attached to the new foundation, steel framing to brace the brick walls, and repairs to wood roof framing would be installed at this time to stabilize the structure. Protection against moisture and infestation would then be reinstated (similar to the initial stabilization) while awaiting final restoration.

- **Final Restoration and Retrofit:** The final restoration of the Roundhouse is proposed to include a seismic retrofit and strengthening of the gravity system using the California Historic Building Code to extend the life of the Roundhouse and provide appropriate seismic safety for use and occupancy of the Roundhouse.

This restoration program complies with the Secretary of Interior's Standards for Rehabilitation as shown on **Table 4.7-2**.

Table 4.7-2: Project Compliance with the Secretary of the Interior Standards for Rehabilitation of Historic Buildings

Standard	Project Compliance Analysis
The property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces, and spatial relationships.	**Consistent.** The Roundhouse has not been actively used since 1957 and has been vacant and subject to decay since that time. The majority of other adjacent buildings and structures, including the tracks in the rail yard, have been removed. The proposed use would be new but would not require extensive changes to distinctive features, spaces, or materials.
The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces, and spatial relationships that characterize the property will be avoided.	**Consistent.** The buildings and features that characterized lands adjacent to the Roundhouse were removed when the maintenance yard closed. The Roundhouse will be located within a park to maintain the building's historic visual prominence. The proposed project includes several phases of work, including stabilization, lifting and placement on a new foundation, and rehabilitation. The building will need to be lifted 6 to 8 feet and placed on a new, higher foundation to be protected from projected sea level rise. Although lifting a historic building onto a new foundation is not the most common or first recommended treatment to address potential flooding, in this case, the whole site needs to be re-graded. Because the Roundhouse is not part of an existing streetscape, raising the structure would not impact its historic character with respect to its relationship to surrounding buildings. Since the whole site must be re-graded, the Roundhouse's massing and relationship with the ground plane will be retained, and no additional access points, stairs, or ramps will be required. The foundation is proposed to be constructed in a manner that is compatible with the historic character of the building, including a concrete floor that will match the design and material of the existing concrete floor, with reconstructed drop pits. Thus, Roundhouse restoration meets the Guidelines on Flood Adaptation for Rehabilitating Historic Buildings with respect to planning and preparation, new foundation design, and construction, access, and associated site alterations, for elevating a historic building on a new foundation. Roundhouse restoration does not involve any new exterior vertical or horizontal additions. Interior partitions and rooms will be constructed

Standard	Project Compliance Analysis
	within the Roundhouse, as well as the south portion of the Roundhouse which is currently open due to the destruction of the roof in a 2001 fire. The existing interior character of the Roundhouse with a generally open volume and stalls defined by rail tracks and wood posts is proposed to remain legible within separated interior spaces, which will each be two to three stalls wide and have ceilings below the roof of the Roundhouse. The space at the south end of the Roundhouse will remain open except for restrooms along the fire wall. The majority of character-defining features of the Roundhouse will be preserved—including the massing, orientation, gable roof and wood framing, cast iron columns, brick walls, fenestration pattern, arrangement of stalls, and spatial relationship to central turntable pit—retaining the overall historic character of the building.
Each property will be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historical properties, will not be undertaken.	**Consistent.** No features or elements from other historical properties will be added to the Roundhouse building. If reconstructed, the drop pits would be clearly presented and interpreted as reconstructed. If not reconstructed, the former location of the drop pits will be indicated by scoring or an outline in the new concrete floor.
Changes to a property that have acquired significance in their own right will be retained and preserved.	**Partially Consistent.** Changes to the Roundhouse during the 1910 to 1957 period of significance include alterations to the rooftop monitors and smokestacks to their present configuration, addition of a wood partition wall between stalls 39 and 40, and the addition of two oversized doorways at stalls 36 and 38. These features have secondary significance and are proposed to be retained except for the wood partition wall which will be removed. Changes that have occurred since the period of significance include destruction of the south portion of the roof due to fire, various graffiti, addition of a corrugated metal enclosure at stall 39, removal of the turntable pit and whisker tracks, and demolition of most surrounding railroad-related buildings and structures. None of these changes has acquired significance in its own right. Since the wood partition wall is being removed, Roundhouse restoration is only in partial compliance with Standard 4.
Distinctive materials, features, finishes and construction techniques or examples of craftsmanship that characterize a property will be preserved.	**Consistent.** Initial stabilization for the Roundhouse will include shoring that is bolted through the mortar joints of the exterior brick wall, minimizing impact to the brick material. Although the building will be lifted to address projected flooding and sea level rise, the distinctive materials, features, finishes, construction techniques, and examples of craftsmanship will generally be retained—including the brick exterior walls, wood trusses and framing, and cast-iron columns. The whisker tracks outside the Roundhouse are no longer extant but tracks within the Roundhouse remain. All existing interior tracks will be removed to lift the building and construct a new foundation and concrete floor. As proposed, historic rail tracks may be installed in at least one stall within the restored Roundhouse, and in other stalls the former location of the tracks would be reflected in the new concrete floor slab through changes in color, pattern, material, or scoring. Severely deteriorated or missing features will be reconstructed based on documentary and physical evidence.
Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials. Replacement of missing features will be	**Consistent.** The Roundhouse has a number of deteriorated and missing historic features due in part to a fire in 2001, as well as continued decay due to vandalism and exposure to the elements. The roof and wood timber structure at a portion of the building (to be enclosed conditioned space) will be restored. The brick walls are generally in good condition and will be cleaned and tuck-pointed, as necessary. The

Standard	Project Compliance Analysis
substantiated by documentary and physical evidence.	roof monitor will be rehabilitated and repurposed for mechanical and ventilation systems, and the smokestacks (chimneys) will be braced in place. The roof beams and supporting columns south of the fire wall have been destroyed and/or damaged beyond repair by the fire. However, the cast-iron columns and beams at the inner curve remain intact, even at the southern fire-damaged portion of the building and will be rehabilitated and retained. Paired wood doors remaining at three of the oversized doorways are deteriorated beyond repair. Oversized paired wood doors will be reconstructed based on available historic drawings and photographs to replicate the material, design, and size of the original doors within their historic openings. Roundhouse restoration will restore or reconstruct window frames, as necessary. Window sashes will be reconstructed to match the original size, design, material, and profile of the historic windows based on available historical drawings and photographs; the reconstructed windows will be installed at all historic openings at the north portion of the building within enclosed conditioned spaces. At the south portion of the building, window frames will be reconstructed, and new mesh metal inserts will be installed to provide security while maintaining air flow.
Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.	**Consistent.** The Roundhouse building has suffered substantial graffiti in the decades following closure of the SPRR maintenance yard that will require abatement. Graffiti removal will be undertaken in accordance with guidance in "NPS Preservation Brief 38 – Removing Graffiti from Historic Masonry," and the gentlest means possible will be used when removing graffiti from brick masonry, as well as any locations on wood or metal materials.
Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.	**Consistent.** Roundhouse restoration will involve excavation work to lift the historic building and construct a new foundation following site grading. The Roundhouse will be restored in its historic location and orientation.
New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work shall be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and environment.	**Consistent.** Extant character-defining features will be retained. Construction materials not using existing Roundhouse building materials will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and environment. No new exterior vertical or horizontal additions are proposed. Several interior partitions and rooms would be constructed within the interior of the Roundhouse, as well as the south portion of the Roundhouse which is currently open due to the destruction of the roof in a 2001 fire. The existing interior character of the Roundhouse with a generally open volume and stalls defined by rail tracks and wood posts is proposed to remain legible within separated interior spaces, which will each be two to three stalls wide and have ceilings below the roof of the Roundhouse. A recessed arcade at the inner curve of the north portion (enclosed conditioned space) of the building will allow the arrangement of stalls, marked at the inner curve by historic cast iron columns, to remain legible. A fully glazed storefront system will be installed in the recessed arcade to enclose the community, museum, and café spaces; this wall will be differentiated as a contemporary material but is compatible in its transparency as it will allow for the roof system and depth of the space to remain legible from the arcade and immediately outside the Roundhouse at the inner curve. At the south portion of the building, all former roof and framing structures

Standard	Project Compliance Analysis
	were severely damaged by fire and only the concrete floor and brick walls remain intact. New steel beams and columns will be contemporary in their material and finish but will be located at historic column locations between stalls so as to maintain the historic character of the stall arrangement. Three low, free-standing signs will be installed along the outer curve of the Roundhouse and will not affect any materials, features, or spatial relationships.
New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.	**Consistent.** Roundhouse restoration does not propose any exterior vertical or horizontal additions. If any of the interior room additions or the new steel beams and posts in the southern portion of the structure were to be removed in the future, the essential form and integrity of the Roundhouse would be retained. The interior room additions have limited physical connection points with the historic building and have lower ceilings—below the rafters of the Roundhouse—which ensure that the interior form of the building is retained. No new buildings are proposed within the circular area of the Roundhouse site—including the turntable pit and whisker tracks. The lifting of the Roundhouse, regrading of site, and placement of the Roundhouse on a new foundation are not easily reversible; however, these changes are proposed in accordance with NPS Guidelines on Flood Adaptation for Rehabilitating Historic Buildings such that essential form and integrity of the historic Roundhouse will be retained. New construction is proposed in the area surrounding the Roundhouse but will have a minimum 50-foot setback in the circular area.

Because of its fragility and the need for grading to protect the site from flooding and sea level rise, a potential for damage to the Roundhouse will exist throughout the five-stage restoration process described above. Damage to the structure could impair its rehabilitation.

As discussed in Section 4.12.5, *Noise and Vibration*, under Impact NOI-5, vibration related to construction activities would not result in a significant impact to the Roundhouse, as the nearest potential for pile driving to the roundhouse location is 300 feet to the south of the northern boundary of the Icehouse District. At this anticipated distance, construction-related vibration would not adversely affect the Roundhouse as a historical resource.

Finally, the Program EIR identified potential adverse effect to the Roundhouse building through changes to its historic setting and recommended implementation of design guidelines to ensure that new development be compatible with the historic structure (including 50-foot setbacks and appropriate height/volume/and material). The Roundhouse location, designated as Roundhouse Park in the current specific plan, is currently proposed to be surrounded by low density residential development (with a maximum height of 50 feet), the site of a potential middle school, parks, and greenways.

Significance Conclusion for Impact CUL-1

The Specific Plan provides a five-stage plan for restoration and adaptive reuse of the historic Roundhouse, implementation of which would comply with the Secretary of the Interior's Standards for Rehabilitation. Damage to the Roundhouse could occur during this process, adversely affecting the building's historic integrity. Finally, visually incompatible construction adjacent to the Roundhouse would adversely affect the historic setting of the building. Proposed low density residential construction zoned adjacent to the Roundhouse site will extend up to a maximum of 50 feet in height, beyond the current visual scale of the Roundhouse. Additionally, proposed design of the residential development and middle school are not yet finalized and may, as a result, be visually incompatible with the Roundhouse. A significant impact requiring mitigation would result.

Baylands development would not have a significant direct or indirect impact on the Machinery & Equipment Building or the Bayshore/Crocker Tunnel as historical resources. No mitigation for these resources is required.

Program EIR Mitigation Measures

MM CUL-1a: Design Guidelines (Program EIR Mitigation Measure 4.D-1b). All Baylands development within 50 feet of the Roundhouse or the Machinery & Equipment building shall be designed to ensure their architectural compatibility with the historic Roundhouse, and to ensure that new buildings do not overwhelm or unnecessarily contrast with these historic buildings. To this end, the reconstructed Roundhouse shall be located no closer than 30 feet from the park boundary, and all development projects shall incorporate a minimum 50-foot structural setback and appropriate heights, volumes, and materials for any proposed new buildings in the immediate vicinity to ensure compatibility with the Roundhouse building. Appropriate heights of new construction adjacent to the Roundhouse would be the same as (about 25 feet), or slightly greater than (i.e., up to 15 feet greater than), the existing height of the building. Appropriate materials for new construction in the immediate vicinity of either building would be brick cladding. Appropriate volumes for new development that would face the Roundhouse should mirror the curve of the existing structure.

All non-residential development projects within 50 feet of the Roundhouse building shall be subject to City design permit review and approval prior to development to ensure consistency with the guidelines.

Significance Conclusion for Impact CUL-1 with Implementation of Program EIR Mitigation Measures

The development of a Preservation and Protection Plan for the Roundhouse after the publishing of the Program EIR provided additional information for treatment of the Roundhouse as a historical resource, analysis of which indicated that impacts on the Roundhouse would be significant without additional mitigation measures due to the potential for inadvertent damage that may occur to the roundhouse during stabilization and restoration.

Additional Mitigation Measures

MM CUL-1b: Timing for Implementation of Initial Safety and Stabilization Measures. The initial Safety and Security Phase measures outlined in the Baylands Roundhouse Stabilization and Restoration Plan shall be undertaken and completed within three months of Specific Plan approval. Initial Stabilization Phase measures, including "mothballing"[150] of the Roundhouse to prevent further damage and deterioration, shall be undertaken no later than six months following completion of Safety and Security Phase measures outlined in the Baylands Roundhouse Stabilization and Restoration Plan (Draft EIR Appendix E.2).

MM CUL-1c: Protocols to Address Potential Damage to the Roundhouse during its Stabilization and Restoration. In the event the Roundhouse building is damaged during any phase of implementing the Stabilization and Restoration Plan, all work shall be halted immediately, and the damage shall be assessed by a historic preservation professional who meets or exceeds the Secretary of the Interior's Professional Qualification Standards for architectural history. This professional shall review the damage and make recommendations for the continuation of Roundhouse stabilization and restoration. Such recommendations shall be submitted to the Brisbane Community Development Director for review and approval. The historic preservation professional's recommendations, as approved by the Community Development Director, shall then be implemented.

Significance Conclusion for Impact CUL-1 Following Implementation of All Mitigation Measures

Mitigation Measure MM CUL-1a would ensure development adjacent to the Roundhouse would be compatible with the historic architectural character of the building. Mitigation Measure MM CUL-1b would prevent continuing deterioration of the Roundhouse or its

[150] Mothballing is proposed in the Roundhouse restoration and reuse plan as part of initial stabilization and will include protecting the structure from further moisture penetration, plant and pest infestation, and stabilizing the structural components against some magnitude of wind and seismic forces.

immediate setting, consistent with Program EIR mitigation measures adopted for the Baylands. Mitigation Measure MM CUL-1c provides a protocol for addressing any damage that may occur to the Roundhouse during restoration activities. Impact CUL-1 is therefore less than significant with mitigation incorporated.

b. Impact CUL-2: Substantial Adverse Change in the Significance of an Archaeological Resource

Methodology for Determining Significance

Impacts on known archaeological resources were assessed by determining whether Baylands development would disturb, damage, or degrade an archaeological historical resource such that it can no longer convey its significance and justify its eligibility for inclusion in the California Register of Historical Resources. Potential impacts on unknown archaeological resources were determined based on the archaeological sensitivity analysis and the proximity and density of known archaeological historical resources. If such Baylands development actions would occur, impacts would be significant. If such actions would not occur or Baylands development would disturb, damage, or degrade archaeological resources that were not determined to be significant historical resources, such actions would have a less than significant impact or no impact.

Impact Assessment

Based on the timing of sea level rise and shoreline models, the potential for significant buried pre-contact archaeological resources is highest in areas closest to the historic-era shoreline, with decreasing sensitivity toward the bay.

One archaeological resource that is also a historical resource has been identified within the Baylands: P-38-005131, Schlage Lock/Ralston Mound. This archaeological historical resource has two components: a pre-contact habitation site with midden and burials, known as the Ralston Shellmound, and the historic-era remains of the Union Pacific Silk Manufacturing Company. Excavation activities within the northerly portion of the Baylands could disturb this resource, which may be an intact deposit, redeposited material from tidal wave action, or part of historic-era reclamation and landscaping activities.[151]

There are no documented archaeological resources in the off-site improvement areas.

[151] Previous work on the resource for the Visitacion Valley Redevelopment Program and due to the presence of human remains, this resource is recommended eligible for listing in the California Register under Criterion 1 (for its association with historical events) and 4 (for its data potential) and is therefore considered a historical resource for the purposes of CEQA.

Significance Conclusion for Impact CUL-2

The Baylands Specific Plan area and surrounding areas have a high sensitivity for buried pre-contact cultural deposits in native soils and a high sensitivity for surficial or shallow historic-era cultural deposits, particularly west of the Caltrain ROW. Pre-contact sensitivity at the surface is also high along the northern and eastern edge of the Specific Plan area which was on the edge of the marshland prior to the placement of artificial fill. Thus, excavations into native soils beneath the artificial fill within the Specific Plan have the potential to disturb buried resources and/or the contextual setting of resources, which constitutes a significant impact requiring mitigation.

Program EIR Mitigation Measures

MM CUL-2a: Inadvertent Discovery of Cultural Resources (Program EIR Mitigation Measure 4.D-2). If any previously unidentified archaeological resources are discovered during ground-disturbing activities associated with development on the Baylands, all work within 100 feet of the resources shall be halted. The City, in consultation with a City-approved qualified consulting archaeologist, shall assess the significance of the find according to CEQA Guidelines Section 15064.5. Prehistoric materials subject to this measure might include obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or toolmaking debris; culturally darkened soil ("midden") containing heat-affected rocks, artifacts, or shellfish remains; stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs); and battered stone tools, such as hammerstones and pitted stones. Historic-era materials subject to this measure might include in-situ (in place) stone, concrete, or adobe footings and walls; filled wells or privies; and in-situ deposits of metal, glass, and/or ceramic refuse.

If any find is determined to be a historical resource or a unique archaeological resource, the City and the consulting archaeologist shall meet to determine the appropriate avoidance measures or other appropriate mitigation. The City shall make the final determination. All archaeological resources recovered shall be subject to scientific analysis, professional museum curation, and documentation according to current professional standards.

Preservation in place, i.e., avoidance, is the preferred method of mitigation for impacts to cultural resources and shall be required unless there are other equally effective methods. Preservation in place would include planning construction to avoid archaeological sites; deeding archaeological sites into a conservation easement, park, or green space; or capping/covering archaeological sites with a layer of soil before building. Other methods to be considered shall include archeological testing, archeological monitoring, and/or an archeological data

recovery program that would include sample excavation, artifact collection, site documentation, and historical research. All archaeological work shall be completed in accordance with an Archaeological Resources Treatment Plan prepared by the City-approved qualifying archaeological consultant. Work may commence upon completion of treatment, as approved by the City.

Significance Conclusion for Impact CUL-2 with Implementation of Program EIR Mitigation Measures

Archaeological investigations conducted after certification of the Program EIR identified new areas with cultural material that indicate that certain portions of the Specific Plan area have higher archaeological sensitivity than previously understood. Therefore, the Program EIR mitigation measures do not sufficiently minimize the potential of the Specific Plan to substantially adversely change the significance of an archaeological resource. This EIR provides additional mitigation measures to address impacts to potentially significant unknown resources.

Additional Mitigation Measures

MM CUL-2b: Cultural Resources Awareness Training. Before any ground-disturbing and/or construction activities other than installation of pile foundations that might disturb native soils beneath the artificial fill within the Baylands, an archaeologist that meets or is under the supervision of an archaeologist that meets the Secretary of the Interior's Professional Qualifications Standards (SOI PQS) for Archeology shall conduct a training program for all construction and field personnel involved in Specific Plan-related ground disturbance prior to such personnel conducting any on-site activities. The training shall outline the general archaeological sensitivity of the area and the procedures to follow if an archaeological resource and/or human remains are inadvertently discovered during Specific Plan-related activities, specifically, procedures developed pursuant to Mitigation Measure MM CUL-2d below. The training may be in the form of an in-person meeting, recorded presentation, or a combination of the two.

MM CUL-2c: Archaeological Testing, Evaluation, and Treatment. For all ground-disturbing activities requiring a grading permit or infrastructure construction plan under the Specific Plan that may disturb native soils, such as grading, excavation for below-grade parking structures, and utility trenching, the Project or Permit applicant shall retain a Secretary of the Interior-qualified archaeologist to prepare an Archaeological Impact Assessment to determine if archaeological testing is needed to determine the depth of fill and/or archaeological sensitivity of the permitted work area.

This Archaeological Impact Assessment of the proposed work will be conducted based on, at minimum, the 30% design plans for the work activity and must be completed before the grading permit or infrastructure construction plan is approved. Previous geotechnical studies, other information about the history of the Baylands, as well as any future subsurface reports, can be used to determine if there is sufficient information to determine the potential for the activity to impact archaeological resources and determine if additional subsurface work is needed. The Archaeological Impact Assessment will be presented to the City of Brisbane Director of the Community Development Department, or the Director's designee, and will include a determination as to if archaeological testing or other cultural resources mitigation specific to the site assessed is needed. The Archaeological Impact Assessment will also be submitted to the Northwest Information Center.

- If the retained archaeologist determines that the proposed work may impact intact soils, subsurface testing must be completed to the extent possible prior to the issuance of grading permit or infrastructure construction plan. All testing, evaluation, monitoring, and treatment (as warranted) shall be completed by a Secretary of the Interior-qualified archaeologist. A Native American representative registered with the Native American Heritage Commission that is traditionally and culturally affiliated with the geographic area as described in Public Resources Code Section 21080.3 will be offered the opportunity to collaborate with the archaeologist in the testing, evaluation, and treatment.
- Testing shall be completed according to an established *Archaeological Testing Plan*, which will be prepared and submitted to the Director of the City of Brisbane Community Development Department, or the Director's designee, for review and approval. The *Archaeological Testing Plan* shall include, at a minimum, the identification of the property types of the expected archaeological resource(s) that could be affected by the to-be-permitted ground-disturbing activity; testing methods to be used (hand excavation, coring, and/or mechanical trenching); and the locations recommended for testing. The purpose of testing shall be to determine the presence or absence of archaeological resources and completed as feasible, determined by the Secretary of the Interior-qualified archaeologist.
- As part of the *Archaeological Testing Plan*, a Health and Safety Plan (HASP) will be prepared by the qualified archaeologist in consultation with the project proponent or permittee. The qualified archaeologist leading the

archaeological testing effort shall be Hazardous Waste Operations and Emergency Response-certified, if required, and will be responsible for implementing the HASP, including distributing the plan to field personnel and conducting a safety meeting prior to the commencement of field studies, to protect construction workers, the public, and the environment. All personnel on site will be required to follow the protocol detailed in the HASP.

- Following testing, archaeological monitoring during construction may be recommended by the archaeologist, if deemed necessary. Archaeological monitoring shall be conducted according to an established *Archaeological Monitoring Plan*, which will be prepared and submitted to the Director of the City of Brisbane Community Development Department, or the Director's designee, for review and approval. The Archaeological Monitoring Plan shall include, at a minimum, where monitoring will be completed and under what circumstances based on soil types, geology, distance to known sites, and other factors; person(s) responsible for conducting monitoring activities, including an archaeological monitor and a tribal monitor; schedule for submittal of monitoring logs/reports; and protocol for notifications in case of encountering cultural resources, as well as methods of dealing with the encountered resources. During the course of the monitoring, the archaeological monitor and tribal monitor may adjust the frequency—from continuous to intermittent—of the monitoring based on the conditions and professional judgment regarding the potential to impact resources.
- If any archaeological resources are encountered during testing and/or monitoring, the Project or Permit Applicant shall ensure that all resources are evaluated by a Secretary of the Interior-qualified archaeologist based on California Register of Historical Resources criteria and consistent with the approved plans. If the resource is determined to be significant by the City of Brisbane, in consultation with the Secretary of the Interior-qualified archaeologist, and, if applicable, the tribal monitor, the Project or Permit Applicant, in consultation with the Director of the City of Brisbane Community Development Department, or the Director's designee shall determine whether preservation in place is feasible. Consistent with Public Resources Code Section 21083.2(b) and CEQA Guidelines Section 15126.4(b)(3), this may be accomplished through planning construction to avoid the resource; incorporating the resource within open space; or capping and covering the resource.
- If a significant archaeological resource(s) is in the Project Area, and cannot be avoided, the Project or Permit Applicant, a Secretary of the

Interior-qualified archaeologist, the Director of the City of Brisbane Community Development Department, or the Director's designee, and a Native American representative registered with the Native American Heritage Commission that is traditionally and culturally affiliated with the geographic area as described in Public Resources Code Section 21080.3 shall determine treatment measures to minimize or mitigate any potential impacts to the resource pursuant to PRC Section 21083.2 and CEQA Guidelines Section 15126.4. This shall include documentation of the resource and may include data recovery, if deemed appropriate by the City of Brisbane, in consultation with the Secretary of the Interior-qualified archaeologist, and, if applicable, the tribal monitor, or other actions such as treating the resource with culturally appropriate dignity and protecting the cultural character and integrity of the resource.

- If deemed appropriate, data recovery shall be completed according to an established *Archaeological Resources Treatment Plan*, which will be prepared and submitted to the Director of the City of Brisbane Community Development Department, or the Director's designee, for review and approval. The *Archaeological Resources Treatment Plan* shall include, at a minimum, the scope of work; the environmental setting; research questions and goals; a detailed field strategy to address research goals; analytical methods; disposition of artifacts; security approaches and protocols; and reporting requirements. Data recovery may include, but is not limited to, backhoe trenching, shovel test units, hand auguring, and hand excavation.
- Components of the *Archaeological Testing Plan*, *Archaeological Monitoring Plan*, and *Archaeological Resources Treatment Plan* may be combined, as deemed appropriate by the Secretary of the Interior-qualified archaeologist. All documentation shall be submitted to the Northwest Information Center, the Native American Heritage Commission Sacred Lands File, and the Director of the Community Development Department or the Director's designee.

MM-CUL-2d: Site-Specific Mitigation for P-38-005131. For each Archaeological Impact Assessment completed for MM-CR-3, Archaeological Testing, Evaluation, and Treatment, the Secretary of Interior-qualified archaeologist shall determine if intact deposits associated with P-38-005131 may be impacted within the permitted work area. This assessment will be included in the Archaeological Impact Assessment.

Significance Conclusion for Impact CUL-2 Following Implementation of All Mitigation Measures

Mitigation measures MM-CR-2a, Cultural Resources Awareness Training; MM-CR-2b, Archaeological Testing, Evaluation, and Treatment; and MM-CR-2c, Site-Specific Mitigation for P-38-005131; require that, prior to Project construction, an Archaeological Testing Plan be established to clarify the depth of fill and the sensitivity of the construction site for archaeological resources, and to determine if P-38-005131 has a subsurface component within that site. Mitigation measures have also been included that require a cultural resources awareness training be provided for all construction personnel involved in ground-disturbing work and that archaeological monitoring be conducted in all areas identified as sensitive as a result of the archaeological testing. While highly unlikely that archaeological resources would be found in the landfill or disturbed portions of the Baylands, it has become an industry standard practice that an awareness training be conducted for all construction personnel who are involved in ground disturbance. These mitigation measures ensure that impacts to archaeological historical resources would be reduced to less than significant.

c. Threshold CUL-3: Substantial Adverse Change in the Significance of a Tribal Cultural Resource

Methodology for Determining Significance

Impacts on tribal cultural resources are assessed in consultation with the affiliated Native American tribe in accordance with Public Resources Code Section 21080.3. This analysis considers whether the Proposed Project would cause damaging effects to any tribal cultural resource, including archaeological resources and human remains.

Impact Assessment

The EIR's cultural resource technical consultant, ESA, contacted the California Native American Heritage Commission (NAHC) on February 9, 2023, to request a search of their Sacred Lands File and a list of Native American tribes in the vicinity who may have an interest in the proposed Specific Plan. On February 20, 2023, NAHC responded stating that the file search was negative for sacred sites. The NAHC also provided contact information for eight tribal representatives from six Tribes for additional information.

Pursuant to the requirements of AB 52 and SB 18, consultation was offered to six Tribes that may have at one time occupied the Baylands site. The City provided formal notification to California Native American tribal representatives identified by the NAHC to offer consultation with interested tribes regarding the proposed Specific Plan, including:

- Muwekma Ohlone Indian Tribe of the SF Bay Area, Chairperson

- Muwekma Ohlone Indian Tribe of the SF Bay Area, Most Likely Descendent Contact
- Costanoan Rumsen Carmel Tribe
- Ohlone Indian Tribe
- Indian Canyon Mutsun Band of Costanoan, Chairperson
- Indian Canyon Mutsun Band of Costanoan, Most Likely Descendent Contact
- Wuksachi Indian Tribe/Eshom Valley Band
- Amah Mutsun Tribal Band of Mission San Juan Bautista

No Tribes responded to this formal notification and no information regarding the presence of tribal cultural resources within the Baylands were therefore provided.

Significance Conclusion for Impact CUL-3

No tribal cultural resources were identified in the Specific Plan area, and therefore, no impacts in relation to tribal cultural resources would result from the Baylands Specific Plan.

d. Threshold CUL-4: Disturb Human Remains

Methodology for Determining Significance

The assessment of impacts related to human remains consists of a qualitative review of the existing cultural resource conditions and previous land uses within the Specific Plan area, the potential for human remains to be located within the Baylands, and a determination of whether there are adequate provisions to ensure protection of human remains, if found during grading and construction activities. An impact would be considered significant if human remains are disturbed outside of the guidelines of the California Health and Safety Code and the Public Resources Code.

Impact Assessment

As described previously, nearly all of the Baylands site consists of historical fill and has been previously disturbed and developed; however, Specific Plan development could involve excavation in native soils underlying the site.

In the event of an inadvertent discovery or recognition of any human remains during ground disturbance activities, regulations pursuant to California Health and Safety Code Section 7050.5 would be implemented. These regulations require that if human remains are unearthed during construction, then no further disturbance shall occur until the County Coroner has made the necessary findings regarding the origin and disposition of the remains pursuant to Public

Resources Code Section 5097.98, which outlines the NAHC notification process and the appropriate procedures if the Coroner determines the human remains to be Native American.

PRC Section 5097.98 also requires that no further disturbances occur in the immediate vicinity of the discovery, that the discovery is adequately protected according to generally accepted cultural and archaeological standards, and that further activities take into account the possibility of multiple burials. PRC Section 5097.98 further requires the NAHC, upon notification by a County Coroner, designate and notify a Most Likely Descendant (MLD) regarding the discovery of Native American human remains. The MLD has 48 hours from the time of being granted access to the site by the landowner to inspect the discovery and provide recommendations to the landowner for the treatment of the human remains and any associated grave goods.

Significance Conclusion for Impact CUL-4

The Specific Plan would be implemented in compliance with Health and Safety Code Sections 7050.5 and 7052.5 and Public Resources Code Section 5097.98. Compliance with these regulations would protect any previously unidentified human remains, and impacts would be less than significant.

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4.8 TRANSPORTATION

4.8.1 INTRODUCTION

a. Overview

This section evaluates transportation impacts of Baylands development both during construction and ongoing operations. Transportation-related issues addressed in this section include:

- Vehicle miles traveled (VMT);
- Motorist, pedestrian, and bicycle safety;
- Multi-modal transportation availability; and
- Adequacy of emergency access.

Senate Bill (SB) 743: Analysis of Traffic Congestion

State law (SB 743; Pub. Res. Code Section 21099(b)(2)) and CEQA Guidelines Section 15064.3 state that that a project's effect on automobile traffic delay (congestion) is not to be considered a significant environmental effect. This section of the Draft EIR addresses vehicle miles traveled (VMT) rather than level of service (LOS) and other traffic congestion metrics that were analyzed in the Program EIR. Evaluation of consistency with General Plan LOS standards is provided for informational purposes in Draft EIR Section 4.3, *Land Use and Planning Policies*.

The information and analyses presented in this section are based on the Transportation Impact Assessment (TIA) found in Draft EIR Appendix F.1, which includes *Supplemental Roadway Design Guidelines for Baylands Roadways* and the *Bayshore Boulevard Mobility Plan*, both of which are included as appendices to the TIA. Portions of this section are also based on the *Baylands Safe Routes to School Study*, which was also prepared by Fehr & Peers and can be found in Draft EIR Appendix F.2.

b. Definitions

Average Daily Traffic (ADT) represents the average traffic volume during a typical 24-hour day.

Bike lane refers to a corridor expressly reserved by markings for bicycles, existing on a street or roadway in addition to any lanes for use by motorized vehicles (Class II Bikeway).

Bike path refers to a paved route not on a street or roadway and expressly reserved for bicycles. Bike paths may run parallel to roads but are typically separated from them (Class I Bikeway).

Bike route refers to a facility shared with motorists and identified by signs or pavement marking symbols. A bike route does not have lane stripes (Class III Bikeway).

Bus rapid transit (BRT) is a bus-based transit system that generally has specialized design, services, and infrastructure to improve system quality and remove the typical causes of delay. BRT aims to combine the capacity and speed of light rail with the flexibility, lower cost, and

simplicity of a bus system by providing fully dedicated bus lanes. CEQA Section 21060.2 defines bus rapid transit as having all of the following characteristics:

(1) Full-time dedicated bus lanes or operation in a separate right-of-way dedicated for public transportation with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.

(2) Transit signal priority.

(3) All-door boarding.

(4) Fare collection system that promotes efficiency.

(5) Defined stations.

Thus, a BRT system typically has one or more of the following elements:

- Fully dedicated bus lanes
- Alignment in the center of the road (to avoid typical curb-side delays);
- Stations with off-board fare collection (to reduce boarding and alighting delay related to paying the driver);
- Station platforms level with the bus floor (to reduce boarding and alighting delay caused by steps); and/or
- Bus priority at intersections (to avoid intersection signal delay).

Chicane refers to a serpentine curve in a roadway that is added by design rather than dictated by geography. Chicanes add extra turns and are used to slow traffic for safety purposes.

Collector refers to a transitional street design that is between arterials and local streets. A collector is typically designed to carry 3,000 to 10,000 vehicles per day with one or more travel lanes in each direction.

Major arterial is a roadway that is typically designed to carry over 30,000 vehicles per day with a minimum of two full-time through lanes in each direction in addition to a separate median lane (raised or painted) to accommodate left-turn movements.

Major transit stop is defined in California Public Resource Code Section 21064.3 as a site containing any of the following: (a) an existing rail or bus rapid transit station, (b) a ferry terminal served by either a bus or rail transit service, (c) the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.

Minor arterial is a roadway that is typically designed to carry 15,000 to 30,000 vehicles per day, with a minimum of two travel lanes in each direction. A separate (generally painted) median lane to accommodate left-turn movement is desirable if there is sufficient roadway width.

OPR refers to the Governor's Office of Planning and Research, which is now formally referred to as the Governor's Office of Land Use and Climate Innovation.

Paratransit consists of an alternative mode of passenger transportation that does not follow fixed routes or schedules and consists typically of vans or minibuses. Paratransit services are operated by public transit agencies, community groups, or not-for-profit corporations, and for-profit private companies or operators.

Passenger car equivalent (PCE) is a factor used to adjust heavy vehicles for an accurate evaluation of trips, recognizing the larger size and slower travel of truck as compared to passenger cars. PCE volumes were computed for construction traffic analysis using a PCE factor of 3.0, which means that one truck trip is considered to be the equivalent of three passenger car trips.

Peak hour represents the one-hour period between 7:00 and 9:00 a.m. and between 4:00 and 6:00 p.m. that experiences the heaviest amount of traffic on a given intersection, freeway interchange, or freeway mainline segment.

Regional arterial refers to Bayshore Boulevard and the Geneva Avenue extension that serve regional functions and carry large volumes of traffic generated from outside of Brisbane that do not have a destination within the City.

Roadway capacity refers to the maximum hourly of daily number of vehicles that can be reasonably expected to traverse along a roadway segment under prevailing roadway, traffic, and control conditions.

Right-of-way refers to any place that is dedicated to use by the public for pedestrian and vehicular travel. A right-of-way may include, but is not limited to, a street, sidewalk, curb, and gutter. A right-of-way may be a crossing, intersection, parkway, median, highway, alley, lane, mall, court, way, avenue, boulevard, road or roadway, railway, viaduct, subway, tunnel, bridge, thoroughfare, park square, or other similar public way.

Trip refers to a one-way journey that proceeds from an origin to a destination via a single mode of transportation. It is the smallest unit of movement considered in transportation studies. Each trip has one "production end" (origin) and one "attraction end" (destination).

Vehicle miles traveled (VMT) refers to the amount and distance of automobile travel based on the following formula:

Number of trips x average distance (in miles) per trip = vehicle miles traveled (VMT)

4.8.2 PHYSICAL ENVIRONMENTAL SETTING

a. Baseline

The recirculated Notice of Preparation review period (April 2023) is generally used to describe existing conditions, and analyze direct and indirect impacts of the Baylands Specific Plan and related development, as well as to assess cumulative impacts.

In addition, Year 2035 and 2040 scenarios are used to analyze the Specific Plan's cumulative contribution to mid-term cumulative transportation conditions (2035), which corresponds to projected completion of Phase 1 development and long-term cumulative transportation conditions (2040), which addresses project buildout.

b. Existing Roadway System

Freeways

Regional vehicular access is provided by the two freeways that operate near the Baylands.

U.S. Highway 101 (US 101) runs between downtown Los Angeles and Olympia, Washington, near the Pacific coastline. Adjacent to the Baylands, US 101 is a limited-access eight-lane freeway that connects Brisbane and the Peninsula with San Francisco and Marin County to the north and Silicon Valley and San Jose to the south. US 101 has southbound off-ramps to Bayshore Boulevard, Beatty Avenue, and Lagoon Way, along with northbound off-ramps to Sierra Point Parkway and Harney Way.

Interstate-280 (I-280) is an eight- to ten-lane freeway that runs north–south, parallel to US 101 between San Francisco and San Jose. I-280 is often used as a bypass for travelers to avoid congestion along US 101, since it does not pass directly through urbanized areas and has less congestion. I-280 is located approximately three miles west of the Baylands and can be accessed via Geneva Avenue, US 101, and I-380.

Roadways

Local access to the Baylands is provided by arterial, collector, and local streets within Brisbane and the adjacent cities of San Francisco and Daly City. **Table 4.8-1** identifies local roadways in the Baylands area by characteristics and whether the street is included in San Francisco's Vision

Zero High Injury Network[152] or C/CAG's Youth-Based High Injury Network (CCSF 2024; SMCCAG 2022).[153]

Table 4.8-1: Area Roadway Characteristics

Roadway Name	Direction	# of Through Lanes	City	Functional Classification[a]	High Injury Network[b]	Posted Speed Limit (MPH)
Area Roadways						
Bayshore Blvd.	North–South	4	Brisbane/SF/ Daly City	Regional Route	Yes	45/35 (in SF)
Geneva Ave.	East–West	4	SF/Daly City	Regional Route	Yes	35
Alana Way	North–South	3	Brisbane/SF	Principal Arterial	—	25
Harney Way	East–West	2-3	Brisbane/SF	Principal Arterial	—	40
Guadalupe Canyon Pkwy.	East–West	4	Brisbane/Daly City	Principal Arterial	—	45
Visitacion Ave.	East–West	2	SF	Minor Arterial	Yes	25
Sunnydale Ave.	East–West	2	SF	Minor Arterial	Yes	25
Valley Drive	East–West	4	Brisbane	Minor Arterial	—	40
Old County Rd.	East–West	2	Brisbane	Minor Arterial	—	25
San Bruno Ave.	East–West	2	Brisbane	Minor Arterial	—	35
Blanken Ave.	East–West	2	SF	Major Collector	—	25
Executive Park Blvd.	East West	2	SF	Major Collector	—	25
Main St.	East–West	2	Brisbane/Daly City	Local	—	25
Baylands Roadways						
Tunnel Ave.	North–South	2	SF/Brisbane	Minor Arterial	—	35 (25 in SF)
Beatty Ave.	East–West	2	Brisbane	Minor Arterial	—	25
Lagoon Rd.	East–West	2	Brisbane	Minor Arterial	—	35
Sierra Point Pkwy.	East–West	2	Brisbane	Minor Arterial	Yes	25

SOURCE: Baylands Specific Plan 2025; Fehr & Peers 2024.

NOTES:

a. Roadway functional classifications are identified from the Caltrans functional classification geodatabase.
b. Roadways in San Francisco County are identified from San Francisco's 2022 High Injury Network Database. Roadways in San Mateo County (Daly City) are from the C/CAG's Local Road Safety Plan.

Bayshore Boulevard is a four-lane regional arterial that flanks the west side of the Baylands and parallels US 101 between Caesar Chavez Boulevard in San Francisco and South San Francisco,

[152] San Francisco adopted Vision Zero in 2014, with the goal of zero transportation deaths, including people driving, walking, and bicycling. The network identifies streets in San Francisco where most severe and fatal injuries are concentrated and is intended to target traffic safety investments to reduce severe and fatal injuries to people walking, bicycling, and driving in those locations. See: http://visionzerosf.org/about/what-is-vision-zero/.

[153] C/CAG developed a youth-based High Injury Network (HIN) based on collision characteristics, crash patterns, and user types to develop a combined Safety Priority Index Score for each roadway. The report that shows the designated roadways listed on the HIN based on the priority index from 2014-2020 is presented here: https://ccag.ca.gov/wp-content/uploads/2022/07/San-Mateo-County-SRTS_HIN-Report.pdf.

where Bayshore Boulevard becomes Airport Boulevard. Bayshore Boulevard is maintained by the City of Brisbane south of Geneva Avenue, Daly City between Geneva Avenue and the San Francisco County line just south of Sunnydale Avenue, and by San Francisco north of the County line. The road is designated as a CMP route in both San Francisco and San Mateo counties and connects Brisbane to San Francisco, Daly City, and South San Francisco.

Bayshore Boulevard also provides a direct connection from the Baylands to the Third Street corridor in San Francisco. Muni T-Third Street light rail operates in the median of Bayshore Boulevard north of Sunnydale Avenue. The SamTrans 292 Caltrain Connection and the 397 All-Nighter bus service operate along Bayshore Boulevard for the length of the Baylands connecting to the Sunnydale Muni Station as well as to Caltrain and BART stations. SamTrans School-day Only routes 24, 29, and 49 have stops on Bayshore Boulevard at Guadalupe Canyon Parkway, Geneva Avenue, and Old County Road, respectively.

There are Class II bike lanes along Bayshore Boulevard with six-foot wide striped bike shoulders and rumble strips on the segment south of Geneva Avenue and Class II bike lanes without the buffer north of Geneva Avenue. Between San Bruno Avenue and Van Waters and Roger Way a mix of parallel and angled parking is permitted along the west side of the boulevard.

Geneva Avenue is a four-lane east–west regional arterial between I-280 (adjacent to the Balboa Park BART Station and the City College of San Francisco Phelan Campus) and Bayshore Boulevard, where it terminates at the Baylands site. Geneva Avenue is a CMP route in both San Francisco and San Mateo counties. The San Francisco and San Mateo Bi-County Transportation Study proposes extending Geneva Avenue through the Baylands to the US 101 freeway. Also proposed is replacing the existing interchange at Beatty Avenue with an improved design.[154]

SamTrans School-day Only routes 24 and 29 service Geneva Avenue west of the Baylands. Class II and Class III bike lanes run east–west along the street, extending from Bayshore Boulevard and beyond Balboa Park Bart Station. The north and south sides of Geneva Avenue have permitted parallel parking between Bayshore Boulevard and Carter Street.

Alana Way is a two-lane east–west road that connects Harney Way in San Francisco with Beatty Avenue in Brisbane. The road provides access for those travelling between the project site and the Candlestick Point area of San Francisco. No on-street parking or loading zones are provided on Alana Way.

Harney Way is a two- to three-lane north–south roadway that runs along the shore of San Francisco Bay and connects the US 101 northbound ramps to Jamestown Avenue in San Francisco's Candlestick Point area and Alana Way on the eastern end of the Baylands. No on-

[154] Preliminary design studies for the interchange were conducted by Caltrans in the 2013 Project Study Report.

street parking is permitted on Harney Way, which is identified as a Green Connector Street in the San Francisco Green Connections Network.

Guadalupe Canyon Parkway is a four-lane east–west arterial street near the Baylands that runs from Bayshore Boulevard into Daly City, where it becomes East Market Street. Guadalupe Canyon Parkway provides access to several office and residential developments within the City of Brisbane. The roadway includes a Class II rumble strip protected bike lane within the Brisbane city limits. Parking is not permitted along Guadalupe Canyon Parkway.

Visitacion Avenue is a two-lane primarily east–west roadway within San Francisco that runs from Bayshore Boulevard at the western end of the Baylands to Mansell Street to the north within San Francisco. There is also a non-contiguous portion of Visitacion Avenue that runs from Tunnel Avenue to Recycle Road within the Baylands. The portion of Visitacion Avenue within the Baylands is not maintained as a public street. No on-street parking is permitted on Visitacion Avenue, and there are no bicycle facilities.

Sunnydale Avenue is a two-lane east–west road north of Geneva Avenue that runs between Bayshore Boulevard and Persia Avenue, providing access to the Visitacion Valley neighborhood of San Francisco. Muni routes 9-San Bruno, 9-San Bruno Rapid, and 56-Rutland service Sunnydale Avenue in the vicinity of the Baylands. Sunnydale Avenue has parallel parking on both south sides of the street.

Valley Drive is a four-lane east–west collector street between Bayshore Boulevard and West Hill Lane that connects Bayshore Boulevard to Crocker Industrial Park and Brisbane City Hall. Commute.org Brisbane-Bayshore Caltrain Shuttle and Brisbane/ Crocker Park BART/ Caltrain Shuttle service Valley Drive in the vicinity of the Baylands. On-street parking is not permitted.

Old County Road is a two-lane east–west road with a center turn lane that connects with Tunnel Avenue at Bayshore Boulevard. It ends at San Francisco Avenue and continues as Visitacion Avenue. The road provides access for those traveling between the Baylands and central Brisbane. It is serviced by Brisbane-Bayshore Caltrain Shuttle and Brisbane/Crocker Park BART/Caltrain Shuttle. There is no parking permitted on Old County Road.

San Bruno Avenue is a two-lane east–west road that connects Bayshore Boulevard, Old County Road, and San Francisco Avenue. It provides access to the neighborhoods within central Brisbane and Firth Park. Commute.org Brisbane-Bayshore Caltrain Shuttle and Brisbane/ Crocker Park BART/Caltrain Shuttle run the length of San Bruno Avenue. San Bruno Avenue has parallel parking on both sides of the street from San Francisco Avenue to Thomas Avenue.

Blanken Avenue is a two-lane east–west roadway that connects Bayshore Boulevard at the northernmost portion of the Baylands and Executive Park Boulevard east of US 101. It provides access from the Baylands and the Visitacion Valley neighborhood of San Francisco to areas east

of US 101. On-street parking is permitted on both sides of the street, which is designated as a Neighborhood Residential street in the San Francisco Better Streets Plan.

Executive Park Boulevard is a two-lane partial loop street east of US 101 northeast of the Baylands that runs between Alana Way and Harney Way in San Francisco's Candlestick Point area. Some on-street parallel parking is permitted and there are landscaped center medians on the roadway between Blanken Avenue and Crescent Way.

Main Street is a two-lane east–west road that runs from Bayshore Boulevard to Linda Vista Drive in the Bayshore Heights neighborhood of Brisbane. The existing Main Street intersection along Bayshore Boulevard marks the southerly limit within the Baylands where residential development would be permitted. No on-street parking is permitted west of Bayshore Boulevard.

Roadways Currently Providing Internal Circulation within the Baylands

Tunnel Avenue is a two-lane, north–south minor arterial. Tunnel Avenue connects to Bayshore Boulevard to the north and south and provides both vehicle access and internal circulation for the Baylands. There is a mix of Class II, Class III, and an unmarked bike route along Tunnel Avenue. Tunnel Avenue has parallel parking from Bayshore Boulevard to just south of Beatty Avenue.

Beatty Avenue is a two-lane east–west minor arterial bordering the northern edge of the Baylands. It provides access to the Recology San Francisco Transfer Station facility north of the Baylands. Although it is less than one-half mile long, Beatty Avenue serves as a key connection to US 101 from Tunnel Avenue. Beatty Avenue serves as part of San Francisco Bicycle Route 805. Parallel parking is permitted on both sides of the street.

Lagoon Road is a two-lane minor arterial running along the north side of Brisbane Lagoon in the southern portion of the Baylands between Tunnel Avenue and Sierra Point Parkway. Lagoon Road has Class II bike lanes on both sides of the street. No on-street parking is permitted.

Sierra Point Parkway is a two-lane minor arterial running parallel to US 101 and Bayshore Boulevard through the southern portion of the Baylands. Southbound on- and off-ramps for US 101 are located within the Specific Plan area (just north of the all-way stop-controlled intersection with Lagoon Way), and northbound on- and off-ramps to US 101 are located just south of the site. While the northbound on- and off-ramps to US 101 were configured as a side-street stop when the Baylands TIA was prepared, a traffic signal became operational in May 2024. Sierra Point Parkway also provides a connection with business parks in the Sierra Point Subarea and South San Francisco. Sierra Point Parkway has Class II bike lanes on the east and west sides of the road. No parking is permitted along Sierra Point Parkway.

Emergency Vehicle Access

Emergency response vehicles in the area typically use major streets when responding to an emergency. Existing arterial roadways allow emergency vehicles to travel at higher speeds and permit other traffic to maneuver out of the path of the emergency vehicle.

Emergency vehicles are currently able to access the Baylands via Bayshore Boulevard at Blanken Avenue, Leland Avenue, Sunnydale Avenue, Geneva Avenue, Main Street, Guadalupe Canyon Road, and Old County Road as well as via Tunnel Avenue at Geneva Avenue and Campus Parkway. The eastern portion of the Baylands is also accessible for emergency vehicles from US 101 at Blanken Avenue, Beatty Avenue, and Lagoon Road as well as via Tunnel Avenue at Blanken Avenue, Beatty Avenue, Geneva Avenue, Campus Parkway, and Lagoon Road.

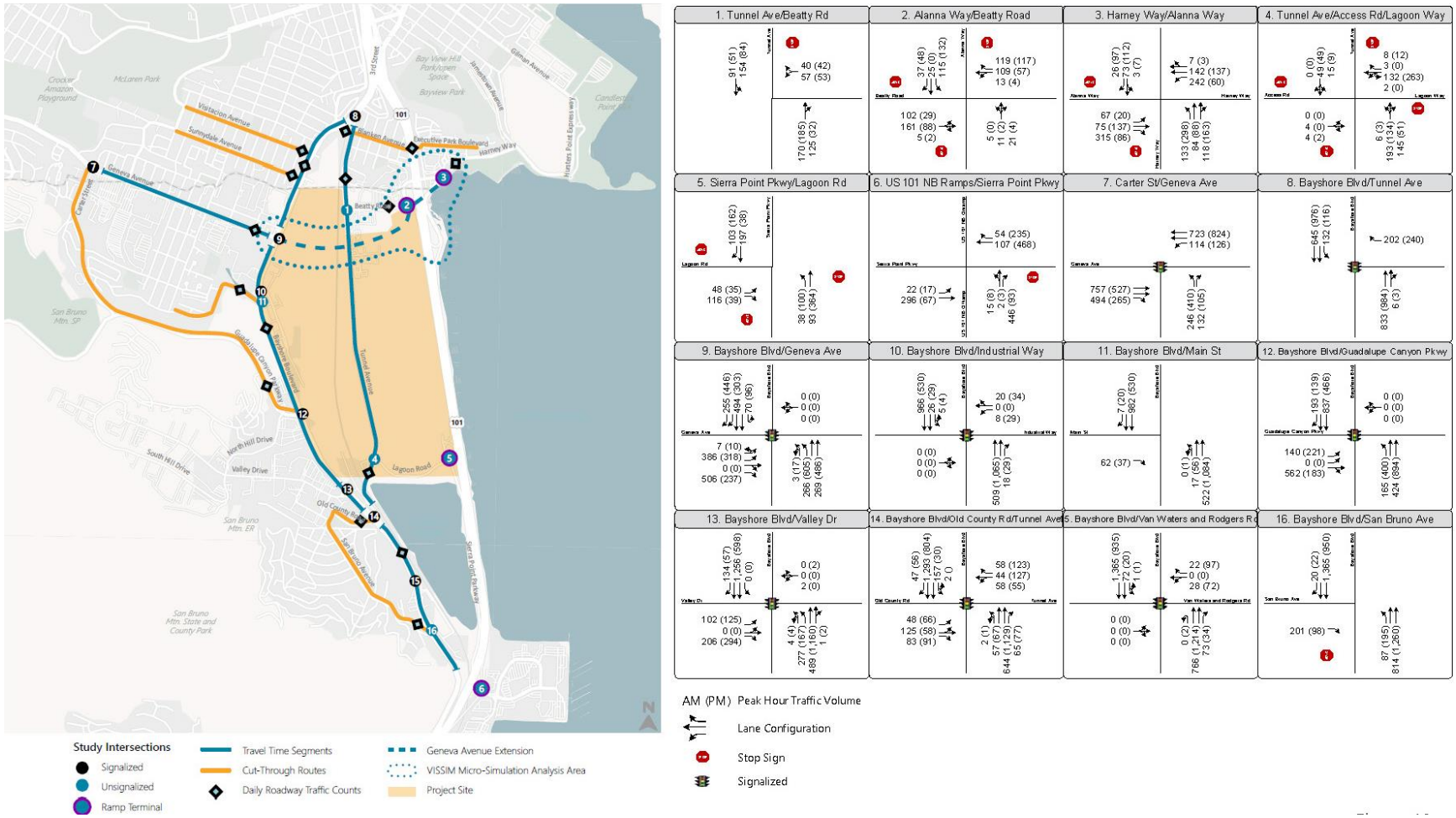
c. Existing Vehicular Traffic and Travel Patterns

Figure 4.8-1 illustrates existing roadway segment volumes in the vicinity of the Baylands. Existing intersection lane configurations and traffic volumes in the area are illustrated in **Figure 4.8-2**. As documented in the Existing Traffic Conditions Memo provided as Appendix A to EIR Appendix F.1, Bayshore Boulevard currently serves primarily as a route for regional traffic through Brisbane.

- Approximately two-thirds to three quarters of existing weekday travel and over 80 percent of existing weekend trips on Bayshore Boulevard are regional through trips with no destination in Brisbane.
- 33 to 36 percent of all trips on Bayshore Boulevard are between San Francisco and cities to the south of Brisbane, representing the highest peak hour regional through trip type.
- 17 percent of all trips on Bayshore Boulevard are between Daly City and cities to the south of Brisbane.
- Less than 3 percent of all existing trips on Bayshore Boulevard were found to start within the Baylands.

Figure 4.8-1: Existing Roadway Segment Volumes

Figure 4.8-2: Existing Intersection Lane Configurations and Traffic Volumes



d. Existing Vehicle Miles Traveled

VMT is a measurement of the amount and distance that a vehicle is driven, regardless of the number of passengers within the vehicle. Many interdependent factors affect the amount and distance a person might drive. In particular, the type of built environment affects how many places a person can access within a given distance, time, and cost, using different modes of travel (e.g., private vehicle, public transit, bicycling, walking). Typically, low-density development with land uses located at great distances from other uses and few alternatives to private vehicles require more miles of vehicular travel than high density areas with a mix of land uses in close proximity and convenient alternatives to vehicular travel. As a result, a low-density suburban style of development typically generates more VMT per capita than would a comparable amount of development in a higher density urban setting. In general, higher VMT areas are associated with higher energy use and air pollutant and greenhouse gas emissions than lower VMT areas. **Table 4.8-2** presents existing VMT per capita generated within the nine-county Bay Area regional average based on the C/CAG-VTA Bi-County Transportation Model (C/CAG Model).

Table 4.8-2: Existing Regional per Capita Vehicle Miles Traveled

Land Use	Nine-County San Francisco Bay Area
Residential	12.8 miles
Employment	15.0 miles

SOURCE: C/CAG Travel Demand Model; Fehr & Peers, 2024

e. Existing Transit Service

According to the 2017–2021 American Community Survey, an estimated 7.3 percent of Brisbane residents commute to work via public transportation on a regular basis, which is lower than San Mateo County (8.6 percent), San Francisco (27.8 percent), and the nine-county Bay Area regional average (9.6 percent). Transit services provided within the vicinity of the Baylands as of April 2023 include the following (see also **Figure 4.8-3** and **Table 4.8-3**):

- **Peninsula Joint Powers Authority (Caltrain)** provides passenger rail service on the Peninsula between San Francisco and San Jose with stops in San Mateo County and Santa Clara County. Caltrain operates 37 northbound and 38 southbound daily weekday trips that stop at the Bayshore Station. On weekends, Caltrain operates 33 northbound and 33 southbound trips. The Bayshore Caltrain Station, which is in the northern portion of the Baylands includes a pedestrian overpass with elevators, ticket machines, and furnished waiting areas. The Bayshore Caltrain Station is served by hourly local service with one train in each direction. Caltrain's 2040 Service Vision, adopted in 2019, envisions 116 total weekday trains serving the Bayshore Station by 2040.

Figure 4.8-3: Existing Transit Service in the Vicinity of the Baylands

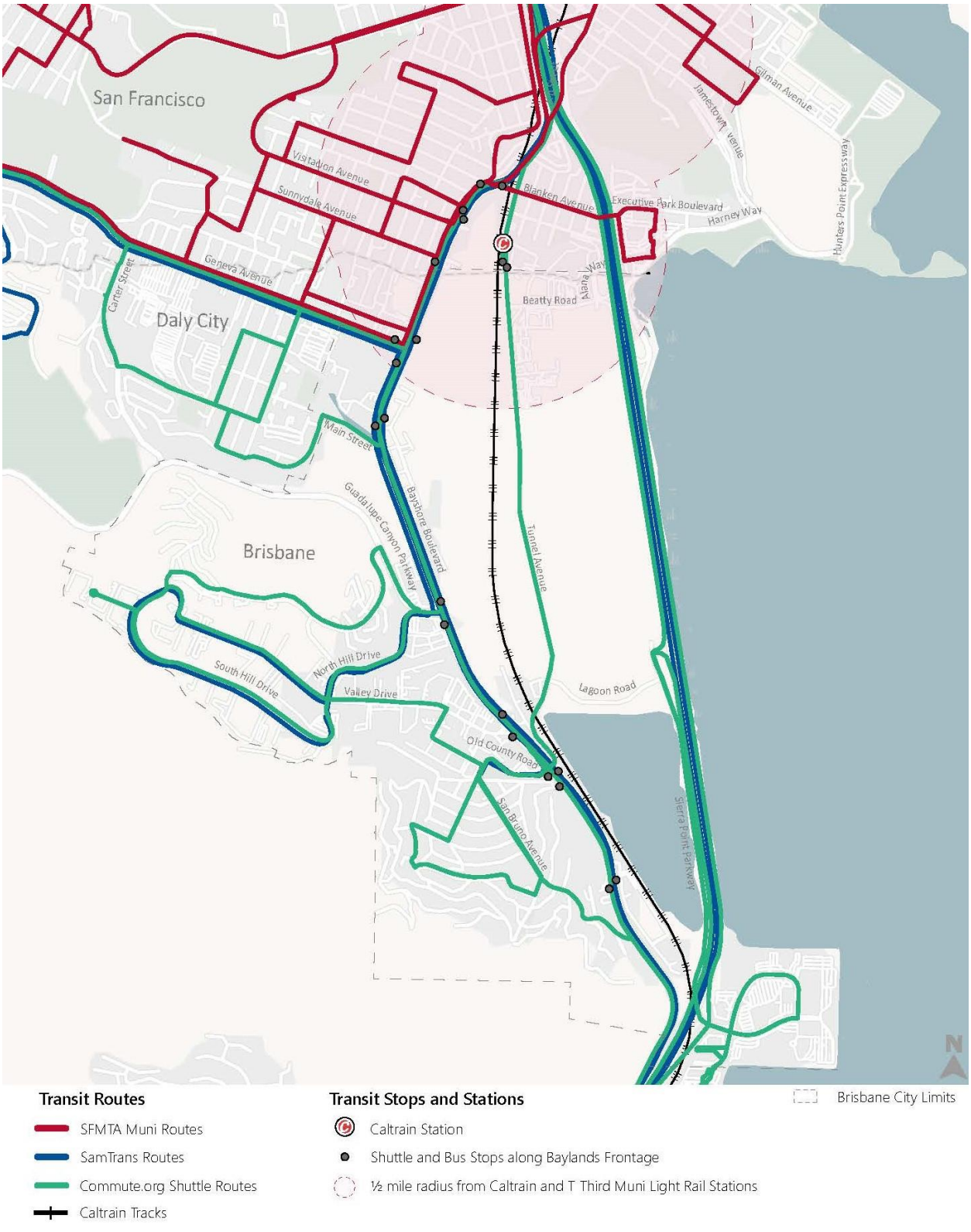


Table 4.8-3: Existing Public Transit Service Characteristics

	Peak Hour Headway	Saturday Headway	Areas Served
San Francisco Muni Bus and Light Rail			
Route 8, 8AX, 8BX Bayshore: Local and Express Commuter Service	5 minutes (Local: AM SB, PM NB Only), 7-11 minutes (Express, Peak direction only)	7-10 minutes (Local) (12 minutes evenings)	San Francisco Neighborhoods: Chinatown, Crocker Amazon Downtown/Civic Center, Excelsior, Financial District, Nob Hill, North Beach, Ocean View, Outer Mission, Russian Hill, South of Market, Visitacion Valley, West of Twin Peaks
Route 9, 9R San Bruno: Local and Rapid Route	10 minutes (Local) 12 minutes (Rapid)	10-11 minutes (Local) 15 minutes (Local evenings)	San Francisco Neighborhoods: Bayview, Bernal Heights, Chinatown, Crocker Amazon, Downtown/Civic Center, Excelsior, Financial District, Mission, Potrero Hill, South of Market, Visitacion Valley, Western Addition
Route 56 Rutland	20 minutes	20 minutes	San Francisco Neighborhoods: Bayview, Visitacion Valley
T-Third	10 minutes (20 minutes evenings)	12 minutes (20 minutes evenings)	San Francisco Neighborhoods: Chinatown, Financial District, South of Market, Potrero Hill, Bayview/Hunters Point, Visitacion Valley
SamTrans Bus Routes			
Route 292 Caltrain Connection	30 minutes	30 minutes (60 minutes evenings)	San Francisco, Daly City, Brisbane, South San Francisco, SFO, Millbrae, Burlingame, San Mateo
Route 397 All-Nighter	60 minutes	60 minutes	San Francisco, Daly City, Brisbane, South San Francisco, SFO, Millbrae, Burlingame, Hillsborough, San Mateo, Belmont, San Carlos, Redwood City, Atherton, Menlo Park, Palo Alto, East Palo Alto
Caltrain			
Bayshore Station (local service only)	30 minutes	60 minutes (bus bridge on select weekends)	San Jose and northern Santa Clara County, San Mateo County, Downtown San Francisco

SOURCES: SFMTA, SamTrans, Caltrain, and Fehr & Peers, 2025.

- **San Francisco Municipal Transit (Muni)** provides bus and light rail service, primarily within the City and County of San Francisco, serving approximately 700,000 average weekday boardings pre-pandemic. Muni service near the Baylands includes light rail and bus service along the Third Street and Geneva Avenue corridors, connecting Downtown San Francisco, Mission Bay, and southeastern San Francisco.

  Muni Bus Routes 8-Bayshore, 8AX-Bayshore A Express, 8BX-Bayshore B Express, 9-San Bruno, and Route 9R-San Bruno Rapid, and 56-Rutland service Bayshore Boulevard with stops at San Bruno Avenue, Sunnydale Avenue, Geneva Avenue, MacDonald Avenue, Visitacion Avenue, and Leland Avenue. The nearest Muni light-rail access is approximately 1,000 feet west of the Bayshore Caltrain Station at the intersection of Bayshore Boulevard and Sunnydale Avenue. The T-Third Street light rail service terminates at Third Street and Sunnydale Avenue.

As shown in **Figure 4.8-3**, the northern portions of the Baylands fall within a one-half-mile radius of the Bayshore Caltrain station or Muni's T-Third light-rail stations and thus qualify as a Transit Priority Area as defined in paragraph (7) of subdivision (a) of Section 21099 of the State of California's Public Resources Code.

- **San Mateo County Transit District (SamTrans)** provides bus service within San Mateo County as well as limited service to select locations in San Francisco, including the Salesforce Transit Center. SamTrans currently operates two bus routes, the 292 Caltrain Connection and 397 OWL that run along Bayshore Boulevard for the length of the Baylands, connecting to the Sunnydale Muni Station as well as Caltrain and BART stations. Both routes have stops at Arleta Avenue, Sunnydale Avenue, Geneva Avenue, Industrial Way, Guadalupe Canyon Parkway, Valley Drive, and Old County Road. SamTrans School-day Only routes 24, 29, and 49 have stops on Bayshore Boulevard at Guadalupe Canyon Parkway, Geneva Avenue, and Old County Road, respectively.
- **San Francisco Bay Area Rapid Transit District (BART)** provides regional rail service between the East Bay (from Antioch, Richmond, Dublin/Pleasanton, and the Berryessa neighborhood of San Jose), San Mateo County (from SFO Airport and Millbrae), and San Francisco, with operating hours between 5:00 a.m. and midnight on weekdays. During the weekday PM peak period, headways are generally 5 to 15 minutes for each line. The BART station most accessible to the Baylands is Balboa Park Station, which is located 2.5 miles to the west via Geneva Avenue. Local transit access is available between the Balboa Park BART Station and the Baylands via Muni routes 8-Bayshore, 8-Bayshore A Express, and 8-Bayshore B Express, as well as via Commute.org Shuttle.
- Commuter Shuttles are operated by **Commute.org**, San Mateo County's Transportation Demand Management Agency, a public agency whose mission is to reduce the number of single occupant vehicles traveling to, from, or through San Mateo County. The Brisbane/Crocker Park BART/Caltrain Shuttle provides service between the Balboa Park BART Station, Bayshore Caltrain Station (PM only), and businesses and office buildings within Brisbane and the southern part of San Francisco during commute hours, Monday through Friday. The Brisbane-Bayshore Caltrain Shuttle provides service between Bayshore Caltrain Station and businesses and office buildings within Brisbane. There are numerous shuttle stops along the frontage of the Baylands (see **Figure 4.8-3**). The closest stops to the Baylands are at Bayshore Boulevard and Geneva Avenue and Tunnel Avenue and Recycle Road at the Bayshore Caltrain stop.
- **Water Emergency Transportation Authority (WETA)** ferries provide service between San Francisco and Alameda and between San Francisco, Oakland, and Vallejo from the San Francisco Ferry Building. The WETA South San Francisco stop is approximately 5 miles from the Baylands. Ferry routes operate with 30- to 60-minute headways, depending on time and day of the week.

- **Transit Priority Areas** are defined in Public Resources Code Section 21099 as "an area within one-half mile of a major transit stop that is existing or planned, if the planned stop is scheduled to be completed within the planning horizon included in a Transportation Improvement Program or applicable regional transportation plan." **Figure 4.8-3**, above, illustrates areas within one-half mile of an existing major transit stop (Caltrain Bayshore station). **Figure 4.8-4**, below, illustrates areas within one-half mile of existing and planned major transit stops. As shown in **Figure 4.8-4**, the majority of development within the Specific Plan area falls within a Transit Priority Area consisting of existing and planned major transit stops.

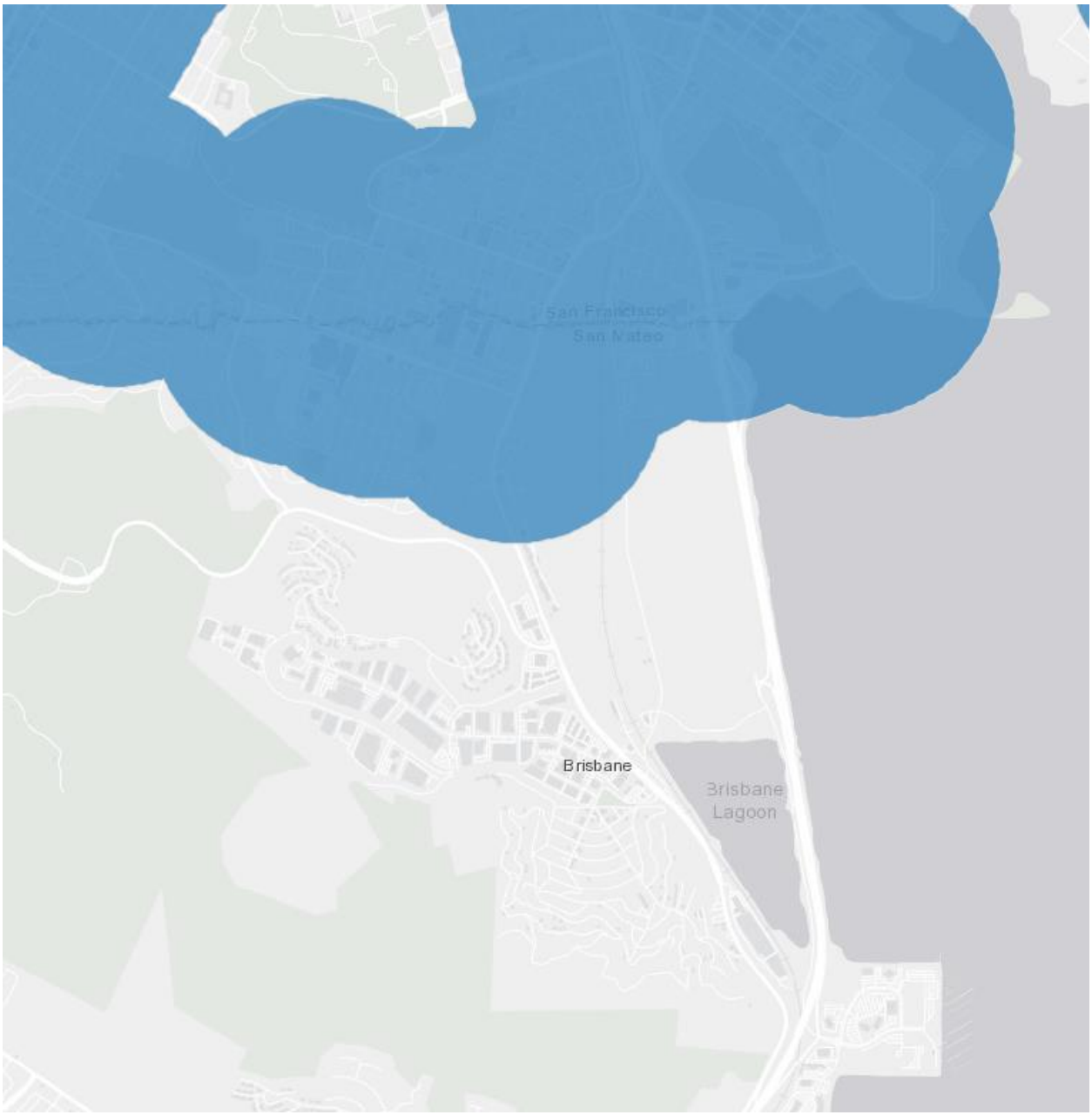
f. Bicycle Facilities

Bicycles are permitted to travel on all public roadways except where they are specifically prohibited on designated highway or freeway segments. Dedicated bicycle facilities, known as "bikeways," consist of bicycle roadway markings, bicycle lanes, and multi-use trails or paths and are grouped into the following four categories:

- **Class I** facilities provide a physically separated right-of-way for exclusive use of bicyclists and pedestrians with minimal crossflow. Class I facilities consist of off-street bicycle paths that are generally shared with pedestrians. Class I facilities may be adjacent to an existing roadway or may be entirely independent of vehicular facilities.
- **Class II** facilities provide a striped lane for one-way travel on a street or highway and consist of striped bicycle lanes on roadways. These facilities reserve a minimum of four to five feet of space for bicycle traffic.
- **Class III** facilities provide for shared use with motor vehicle traffic. Class III facilities consist of designated and signed bicycle routes where bicyclists share the roadway with vehicles. They may or may not be marked with "sharrows" and are usually signed.
- **Class IV** facilities provide a separated bikeway for the exclusive use of bicycles and include a separation between the bikeway and through vehicular traffic. This separation may include, but is not limited to, grade separation, flexible posts, inflexible physical barriers, or on-street parking.

According to the 2017-2021 American Community Survey, an estimated 0.5 percent of Brisbane residents commute to work by bicycle on a regular basis, which is lower than San Mateo County (1.3 percent), San Francisco (3.3 percent), and the nine-county Bay Area regional average (1.4 percent). This mode split does not include commuters that travel by bicycle to transit stations (such as the Bayshore Caltrain Station), which could have a substantial effect on the overall rate of bicycling because Brisbane neighborhoods, including the Baylands, are located within convenient bicycling distance of the Caltrain station. Existing bicycle facilities in the vicinity of the Baylands are shown in **Figure 4.8-5**.

Figure 4.8-4: Transit Priority Areas (Areas within One-Half Mile of Existing and Planned Major Transit Stops



SOURCE: Metropolitan Transportation Commission, https://opendata.mtc.ca.gov/datasets/370de9dc4d65402d992a769bf6ac8ef5_1/about

Figure 4.8-5: Existing Bicycle and Pedestrian Facilities

Regional Bicycle Routes

The San Francisco Bay region enjoys one of the most extensive and interconnected bicycle networks in the nation. The key regional facility serving the Baylands is the San Francisco Bay Trail, an interconnected, multi-use bicycle path that follows the Bay shoreline and will eventually encircle the Bay from San Jose in the south to Napa in the north. Bay Trail segments near the Baylands include Class I bicycle path segments at Candlestick Point to the north (connecting with Class III facilities that continue north to downtown San Francisco) and the existing Class II bike lanes on Sierra Point Parkway south of Lagoon Road (connecting with additional Class I and II facilities that run past the Genentech campus and through South San Francisco). The northern portion of the Baylands presents a gap in the Bay Trail network. Although bicyclists can travel west from the Bay shoreline and use Tunnel Avenue to travel north–south through the Baylands, this alignment is not officially designated as part of the Bay Trail.

Local Bicycle Facilities

Bayshore Boulevard provides north–south bicycle circulation connecting Brisbane with San Francisco to the north and South San Francisco to the south. Bayshore Boulevard is striped with Class II bicycle lanes, with a small portion of the road marked with Class III just south of Geneva Avenue. Within Brisbane, relatively high travel speeds may discourage the use of Bayshore Boulevard by inexperienced bicyclists. Bayshore Boulevard is the major bicycle route in the vicinity of the Baylands and the roadway with the highest vehicle volumes. As such, the bicycle volumes on Bayshore Boulevard are higher than the other roadways in the area. A current AM peak hour volume of 20+ bicycles occur at most area intersections with Bayshore Boulevard. PM peak hour bicycle volumes are slightly lower at these intersections, with approximately 10 to 15 bicyclists along Bayshore Boulevard. The intersection with the highest bicycle volumes during the PM peak hour was Lagoon Road and Tunnel Avenue with 22 bicycles.

Guadalupe Canyon Parkway provides an east–west bicycle facility between Bayshore Boulevard and Mission Blue Drive, connecting with Bayshore Boulevard and newer residential developments in the Brisbane hills. A signed Class I bikeway protected with rumble strips is provided within the Brisbane city limits.

Geneva Avenue has a mix of Class II and Class III bicycle routes providing east–west circulation from Bayshore Boulevard to the west and beyond the Balboa Park BART Station. Class II bicycle facilities are provided on both sides of the roadway from Bayshore Boulevard to Rio Verde Street, after which the north side of the street transitions to Class III, while the south side remains Class II. West of the Balboa Park BART Station, an additional east–west connection to San Francisco State University is provided by a Class III bicycle route on Holloway Street. Geneva Avenue has a mix of residential and commercial land use, which increases vehicle volumes and hazards for bicyclists, but also increases the use of bicycle facilities.

Sunnydale and Visitacion Avenues are not designated as bicycle routes but provide direct east–west connections west of Bayshore Boulevard to the Visitacion Valley and Excelsior neighborhoods of San Francisco.

Valley Drive is not a designated bicycle route, but as noted earlier, bicyclists are permitted to travel on all public roads unless specifically prohibited. Valley Drive provides the most direct connection for bicyclists traveling between Bayshore Boulevard, Brisbane City Hall, Crocker Business Park, and Guadalupe Canyon Parkway.

Old County Road is not a designated bicycle route but provides the most direct connection for bicyclists traveling between the Project site (via Tunnel Avenue) and central Brisbane.

San Bruno Avenue is not a designated bicycle route, but the two-lane, east–west road provides access from Bayshore Boulevard to the central Brisbane and Firth Park neighborhoods.

Existing On-Site Bicycle Facilities

Sierra Point Parkway, which runs parallel to US 101, is designated as part of San Francisco Bay Trail, and connects with Bay Trail segments to the south of the project site in South San Francisco. Sierra Point Parkway has Class II bike lanes on the east and west sides of the road. During field visits conducted in March 2020, six bike commuters in a 6-minute PM peak hour observation period were noted.

Beatty Avenue, an east–west collector street, while not marked with sharrows on the road, serves as part of San Francisco Bicycle Route 805. During field visits conducted in March 2020, one bicyclist was observed in a 4-minute PM peak hour observation period.

Lagoon Road, an east–west collector street, services the Baylands with Class II bike lanes on the north and south shoulders of the road. During field visits conducted in March 2020, four bike commuters were observed in a 6-minute PM peak hour observation period.

Tunnel Avenue, a north–south collector street, services the Baylands with Class II bike lanes from Bayshore Boulevard on the south and Lagoon Road on the north. The portion of this roadway between the southern intersection with Golden State Lumber and Lagoon Road is currently private. Tunnel Avenue continues as an unmarked Class III facility and San Francisco Bike Route 905 until Beatty Avenue, north of which the roadway is marked as Class III. During field visits conducted in March 2020, two bikers were observed in a 6-minute PM peak hour observation period.

Bicycle Support Facilities

Bicycle support facilities may include bicycle parking facilities (such as racks or secure enclosures) as well as shower and locker facilities to encourage bicycle commuting and measures to facilitate bicyclists' use of transit. In the vicinity of the Baylands, regional support

facilities include intermodal links with Caltrain rail service and Muni bus service. Local support facilities include bicycle racks at limited destinations along Bayshore Boulevard. At the northwest edge of the Baylands, the Bayshore Caltrain station provides bicycle lockers to facilitate bicycle commuting, and bicyclists are allowed on designated train cars.

g. Existing Pedestrian Facilities

Due to the Baylands undeveloped and industrial character, pedestrian facilities within or adjacent to the Project site are limited. **Figure 4.8-5** illustrates Baylands intersections and roadway segments that lack crosswalks, curb ramps, or sidewalks. Bayshore Boulevard and Tunnel Avenue are the primary north–south roadways serving the Baylands and lack pedestrian facilities along much of their lengths. There are no sidewalks on the east side of Bayshore Boulevard south of Sunnydale Avenue and no sidewalks on either side of Bayshore Boulevard south of Geneva Avenue. Tunnel Avenue lacks sidewalks south of Recycle Road, and the majority of its intersections do not contain crosswalks.

Local Pedestrian Facilities

Within the developed portions of Brisbane as well as within San Francisco, sidewalks are provided along most streets, and crosswalks are provided at many intersection locations. Key exceptions include segments of Bayshore Boulevard, which lacks sidewalks south of Geneva Avenue other than where provided to connect crosswalks to transit stops. There are dedicated pedestrian facilities in the form of crosswalks with push buttons at all crossings of Bayshore Boulevard with transit stops, including Geneva Avenue, Guadalupe Canyon Parkway, Valley Drive, Old County Road/Tunnel Avenue, and Van Waters and Rodgers Road.

Baylands Pedestrian Facilities

Pedestrian paths are available along the Brisbane Lagoon at the southern end of the Baylands. The rest of the site currently lacks dedicated pedestrian facilities. Internal roadways provide vehicle and truck access but do not include sidewalks.

Public transit stops serving Bayshore Boulevard have varied pedestrian facilities. All stops along Bayshore Boulevard, except for the SamTrans stop at Bayshore Boulevard and Industrial Way, have shelters and benches. However, more than half of all transit stops on Bayshore Boulevard are not wheelchair accessible. Those that are accessible are located further north and are part of the Muni network, such as the Arleta Muni Station, Sunnydale Muni Station, the San Bruno and Bayshore Boulevard stops as well as the southbound SamTrans Bayshore Boulevard and Geneva Avenue stop.

Existing Roadway/Safe Routes to School

Figures 4.8-6 illustrates C/CAG's Roadway Safety Indices and Youth-Based High Injury Network in the vicinity of the Baylands and the existing Bayshore School. As shown in these figures, Geneva Avenue, west of Bayshore Boulevard, is included in the Countywide Youth-Based High Injury Network, as are local roadways used by students traveling to the existing Bayshore School.

4.8.3 REGULATORY CONTEXT FOR BAYLANDS DEVELOPMENT

a. Federal Laws, Plans, Programs, and Regulations

Americans with Disabilities Act of 1990

Titles I, II, III, and V of the Americans with Disabilities Act (ADA) have been codified in Title 42 of the United States Code, beginning at Section 12101. Title III prohibits discrimination on the basis of disability in places of public accommodation (i.e., businesses and non-profit agencies that serve the public) and commercial facilities (i.e., other businesses). This regulation includes Appendix A to Part 36, Standards for Accessible Design, which establishes minimum standards for ensuring accessibility when designing and constructing a new facility or altering an existing facility. Examples of key guidelines include detectable warning for pedestrians entering traffic where there is no curb, a clear zone of 48 inches for the pedestrian travel way, and a vibration-free zone for pedestrians.

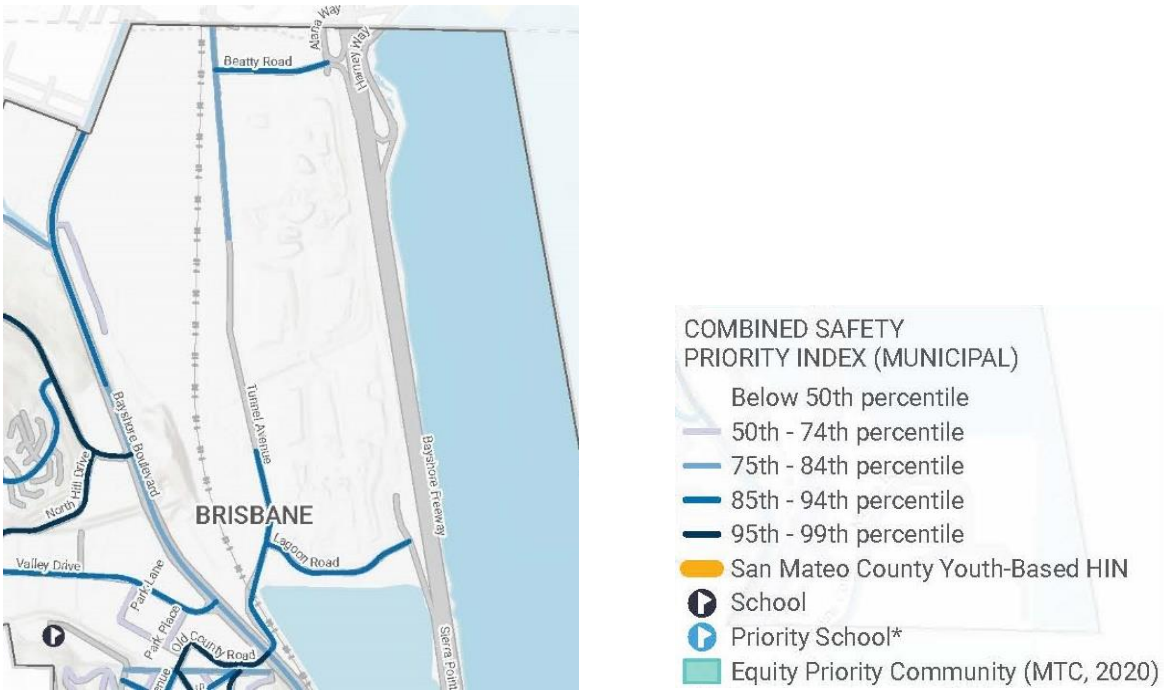
b. State Laws, Plans, Programs, and Regulations

Senate Bill 743; CEQA Guidelines Section 15064.3

Adopted in September 2013, Senate Bill (SB) 743 (Steinberg) eliminated traffic congestion as a significant impact under CEQA within designated Transportation Priority Areas[155] (TPAs) and gave the Governor's Office of Planning and Research (OPR) leeway to eliminate level of service (LOS) from CEQA entirely throughout the state, which it chose to do. The previous Program EIR used an LOS metric to analyze and mitigate the vehicular congestion that would be caused by Baylands development.

[155] A "Transportation Priority Area" is an area located within a one-half mile of an existing or planned "major transit stop" or an existing stop along a "high quality transit corridor." Per Public Resources Code, Section 21064.3, "Major transit stop" means a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods." Per Public Resources Code, Section 21155, a high-quality transit corridor means a "corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours."

Figure 4.8-6: Roadway Safety Indices and Youth-Based High Injury Network: Cities of Brisbane and Daly City



City of Brisbane

City of Daly City

CEQA Guidelines Section 15064.3 (b) implements SB 743 and sets forth the following guidelines for VMT analyses:

- ***Land Use (Development) Projects.*** Generally, projects within one-half mile of either an existing major transit stop or a stop along an existing high quality transit corridor should be presumed to cause a less than significant transportation impact. Projects that decrease vehicle miles traveled in the project area compared to existing conditions should be presumed to have a less than significant transportation impact.
- ***Transportation Projects.*** Transportation projects that reduce, or have no impact on, vehicle miles traveled should be presumed to cause a less than significant transportation impact. For roadway capacity projects, agencies have discretion to determine the appropriate measure of transportation impact consistent with CEQA and other applicable requirements.

To aid in SB 743 implementation, state agencies have prepared the following non-binding guidance documents.

- *Technical Advisory on Evaluating Transportation Impacts in CEQA*, California Governor's Office of Planning and Research, December 2018 (OPR 2018)
- *California Air Resources Board 2017 Scoping Plan-Identified VMT Reductions and Relationship to State Climate Goals*, California Air Resources Board, January 2019 (CARB 2019)
- *VMT-Focused Transportation Impact Study Guide*, California Department of Transportation (Caltrans), May 20, 2020 (Caltrans 2020)
- *Final 2022 Scoping Plan Update*, California Air Resources Board, December 2022 (CARB 2022)

In the *Technical Advisory on Evaluating Transportation Impacts in CEQA* (OPR 2018), OPR recommends that a per capita or per employee VMT that is 15 percent below that of existing development may be a reasonable threshold. This threshold is based on evidence that suggests a 15 percent reduction in VMT is an achievable reduction at the project level in a variety of place types[156] and would help the State toward achieving its climate goals based on currently available information (CAPCOA 2010). OPR also recommends a number of screening criteria, designed to help jurisdictions determine types of projects for which a VMT impact is unlikely, such as adjacent to high quality transit services, in existing low VMT areas, or providing local-serving retail / public facilities (grocery store, neighborhood school, library, drug store, dry cleaners, gym, etc.). OPR also presents the types of transportation projects that would not lead to a substantial increase in VMT, including those that reduce the number of through lanes or add pedestrian or bicycle facilities, among other minor transportation project types. Caltrans'

[156] Place types refer to the context of a project, whether it is urban, suburban, or rural.

VMT-Focused Transportation Impact Study Guide supports the use of the OPR recommendations for land use and transportation projects and plans.

The *California Air Resources Board 2017 Scoping Plan-Identified VMT Reductions and Relationship to State Climate Goals* recommended that a reduction in light-duty VMT of 16.8 percent is necessary to achieve the State's GHG reduction goals. As explained in the OPR's Technical Advisory:

> "Based on OPR's extensive review of the applicable research, and in light of an assessment by the California Air Resources Board (CARB) quantifying the need for VMT reduction in order to meet the State's long-term climate goals, OPR recommends that a per capita or per employee VMT that is fifteen percent below that of existing development may be a reasonable threshold.
>
> Fifteen percent reductions in VMT are achievable at the project level in a variety of place types.
>
> Moreover, a fifteen percent reduction is consistent with SB 743's direction to OPR to select a threshold that will help the State achieve its climate goals. As described above, section 21099 states that the criteria for determining significance must "promote the reduction in greenhouse gas emissions." In its document, the *California Air Resources Board 2017 Scoping Plan-Identified VMT Reductions and Relationship to State Climate Goals*, CARB assesses VMT reduction per capita consistent with its evidence-based modeling scenario that would achieve State climate goals of 40 percent GHG emissions reduction from 1990 levels by 2030 and 80 percent GHG emissions reduction levels from 1990 by 2050. Applying California Department of Finance population forecasts, CARB finds per-capita light-duty vehicle travel would need to be approximately 16.8 percent lower than existing, and overall per-capita vehicle travel would need to be approximately 14.3 percent lower than existing levels under that scenario. Below these levels, a project could be considered low VMT and would, on that metric, be consistent with 2017 Scoping Plan Update assumptions that achieve state climate goals […]
>
> In summary, achieving 15 percent lower per capita (residential) or per employee (office) VMT than existing development is both generally achievable and is supported by evidence that connects this level of reduction to the State's emissions goals.

The *Final 2022 Scoping Plan Update* indicates that to meet statewide greenhouse gas reduction goals, statewide VMT for light duty vehicles must decrease by 30 percent per capita.

The Technical Advisory also provides guidance on transit. More specifically, OPR's Technical Advisory on Evaluating Transportation Impacts under CEQA explains "When evaluating impacts to multimodal transportation networks, lead agencies generally should not treat the addition of new transit users as an adverse impact" (OPR 2018). As also discussed in OPR's SB 743 amendment package transmittal letter, "Legislative findings in Senate Bill 743 plainly

state that CEQA can no longer treat vibrant communities, transit, and active transportation options as adverse environmental outcomes." As an example, the Technical Advisory suggests that "an infill development may add riders to transit systems and the additional boarding and alighting may slow transit vehicles, but it also adds destinations, improving proximity and accessibility. Such development also improves regional vehicle flow by adding less vehicle travel onto the regional network."

Assembly Bill 1266 – Traffic Control Devices: Bicycles (2019)

Assembly Bill (AB) 1266 requires Caltrans to provide guidance on the ways in which to notify bicyclists that they are allowed to traverse straight through an intersection when a right-turn-only lane requires vehicles to turn. Caltrans will be required to develop standards on lane striping, regulatory signage, and pavement markings in these scenarios.

Assembly Bill 1358 – Complete Streets Act

Assembly Bill (AB) 1358, also known as the Complete Streets Bill, amended the California Government Code Section 65302 to require that all major revisions to a city or county's Circulation Element include provisions for multimodal transportation networks that allow all users to effectively travel by motor vehicle, foot, bicycle, and transit to reach key destinations within their community and the larger region. General Plan Guidelines prepared by the Governor's Office of Planning and Research recommend that local jurisdictions view all transportation projects, new or retrofit, as opportunities to improve safety, access, and mobility for all travelers and recognize pedestrian, bicycle, and transit modes as integral elements of their transportation system.

Complete Streets

The complete streets movement seeks to change the way transportation agencies and communities approach every street project and ensure safety, convenience, and accessibility for all.

Complete streets are defined as transportation facilities that are planned, designed, operated, and maintained to provide safe mobility for users of all ages and physical abilities, including bicyclists, pedestrians, transit users, truckers, and motorists, appropriate to the function and context of the facility.

The complete streets concept embodies five core principles:

1. Accommodate all modes of travel.
2. Provide for the health and safety of all users by providing efficient access between destinations throughout the community.
3. Enhance the public realm along streets and create multi-functional places that attract people and commerce.
4. Sustainable design that reduces lifecycle costs and integrates green infrastructure into the roadway network.

Senate Bills 1339 and 1128

Pursuant to Senate Bill 1339, BAAQMD and MTC adopted the Bay Area Commuter Benefits Program on a pilot basis. This program requires Bay Area employers with 50 or more full-time employees in the Bay Area to offer commute benefits to their employees such as pre-tax contributions toward public transit passes or commute shuttle services with the goal of reducing single-occupant vehicle commute trips, traffic congestion, and vehicle emissions.

Senate Bill 1128 authorized BAAQMD and MTC to make the Bay Area Commuter Benefits Program permanent.

Assembly Bill 2097

California Assembly Bill 2097, adopted in 2022, prohibits public agencies from imposing any minimum automobile parking requirement on most development projects located within one-half mile of a major transit stop. AB 2097 does not apply to certain land uses such as hotels and does not affect electric vehicle or accessible parking requirements.

Senate Bill 922

Senate Bill 922, adopted in 2023, made the provisions of Senate Bill 288 that exempt bicycle, pedestrian, light rail, and bus rapid transit projects from CEQA permanent. This applies to transportation projects that make streets safer for walking and biking or improve transit services that are located within the existing right-of-way, do not add automobile capacity, do not demolish affordable housing, and meet minimum labor requirements. In cases where projects are estimated to cost over $100 million, the lead agency is required to undertake expanded public participation, prepare a business case, and conduct a racial equity and displacement analysis to avoid disproportionate impacts.

Caltrans

Caltrans is responsible for the maintenance and operation of State routes and highways. In Brisbane, Caltrans facilities include US 101.

Traffic Impact Study Guidelines

Caltrans released the *VMT-Focused Transportation Impact Study Guide* that recommends use of the OPR recommendations for land use projects and plans (Caltrans 2020a). For transportation projects, Caltrans has suggested that any increase in VMT would constitute a significant impact. This has been referred to as the "Net Zero VMT threshold." Caltrans also recently released the *Interim Land Development and Intergovernmental Review (LDIGR) Safety Review Practitioners Guidance* to provide guidance about the analysis of safety on the state highway system (Caltrans 2020b).

Roadway Design Standards

Caltrans sets standards, policies, and strategic plans for the State's roadway system. The Caltrans Local Assistance Procedures Manual (LAPM), Chapter 11, describes the various procedures and establishes design standards required to process Federal and State funded local transportation projects. The Caltrans *Highway Design Manual*, prepared by the Division of Design for Project Delivery, establishes uniform policies and procedures to carry out the

highway design functions of Caltrans. City of Brisbane Municipal Code Chapter 12.24 states that the City of Brisbane has adopted Caltrans standards for street design.

Local Development Intergovernmental Review (LDIGR) Safety Practitioners

In December 2020, Caltrans issued Traffic Safety Bulletin 20-02-R1 announcing the release of the Interim Local Development Intergovernmental Review Safety Review Practitioners Guidance (LDIGR Safety Review Practitioners Guide) (Caltrans 2020b). This guidance material provides instructions to Caltrans personnel, lead agencies, developers, and consultants for conducting safety impact analysis for land use projects and plans to facilitate compliance with CEQA. The guidance sets expectations for Caltrans staff and lead agencies about what information and factors to consider in safety impact analysis with a focus on potential safety impacts affecting the California State Highway System (SHS). Integrating safety in the Caltrans land development and intergovernmental review process helps to solidify a culture of safety in California through the Safe System approach.

Caltrans recommends lead agencies use systemic safety plans, specifically Local Roadway Safety Plans (LRSPs), Systemic Safety Analysis Reports (SSARs), and Vision Zero plans, as models for safety analysis of the local transportation network. These plans can help local jurisdictions obtain resources to improve safety in their communities, and they will now be an input to assessing the potential safety impacts of new land use projects and land use plans.

Encroachment Permit Guidelines and Traffic Control Plans

Construction within rights-of-way of facilities under Caltrans jurisdiction requires a Caltrans Encroachment Permit, which includes a Traffic Control Plan in compliance with the Manual on Uniform Traffic Control Devices (MUTCD) (Caltrans 2024a). Included in these requirements are provisions for coordination with local emergency services, training for flagmen for emergency vehicles traveling through the work zone, temporary lane separators that have sloping sides to facilitate crossover by emergency vehicles, and vehicle storage and staging areas for emergency vehicles. MUTCD requirements also provide for construction work during off-peak hours and flaggers.

c. Regional Plans, Programs, and Regulations

Metropolitan Transportation Commission

Plan Bay Area 2050

Plan Bay Area 2050 serves as the Bay Area's Regional Transportation Plan and its Sustainable Communities Strategy. A description of relevant provisions of Plan Bay Area 2050 for Baylands development is provided in Section 4.3.3c of this EIR.

Complete Streets Policy (Resolution 4493)

See Section 4.3.3c of this EIR for discussion of MTC's Complete Streets Policy.

Transit-Oriented Communities Policy (Resolution 4530)

To implement Plan Bay Area 2050 and create communities around transit stations and along transit corridors that support transit ridership, MTC's Transit-Oriented Communities Policy provides land use and transit orientation criteria for areas within a one-half mile of existing and planned fixed-guideway transit stops and stations serving regional rail, commuter rail, light-rail transit, bus rapid transit, and ferries.

Within Brisbane, the area within one-half mile of the Bayshore Caltrain station and T Third Muni stops is shown on **Figure 4.8-3**. However, this does not include other SamTrans or Muni bus stops, given the requirement for a fixed-guideway transit that occupies a separate right-of-way to qualify as bus rapid transit. Given this level of transit service, Brisbane is classified as a Tier 3 city, for which the Transit-Oriented Communities Policy identifies the following transportation features:

- Parking maximum of one space per unit or lower for residential buildings and 2.5 spaces per 1,000 square feet or lower for commercial buildings;
- A minimum of one secure bicycle parking space per dwelling unit;
- A minimum of one secure bicycle parking space per 5,000 occupied square feet for commercial office uses;
- Allow unbundled parking;
- Allow shared parking between different land uses;
- Adopt policies and design guidelines to comply with MTC's Complete Streets Policy;
- Complete access gap analysis for station access within a 10-minute walk;
- Identify opportunities to implement mobility hubs at locations identified by MTC.
- Parking management:
    - Residential Development: No minimum parking requirement to be applied with no more than 1.0 spaces per unit to be permitted.
    - Commercial Development: No minimum parking requirement to be applied with no more than 2.5 spaces per 1,000 square feet to be permitted.
- Transit Station Access:
    - Adopt policies and design guidelines that comply with MTC's Complete Streets Policy (MTC Resolution No. 4493).

- Provide improvements to allow station access via a 10-mintue walk (including for people who use wheelchairs or other mobility aids) and 15-minute bicycle or bus/shuttle trip for uses within one-half mile of the transit station.

See Section 4.3.3c of this EIR for additional details regarding MTC's Transit-Oriented Communities Policy.

C/CAG Congestion Management Program

The City/County Association of Governments (C/CAG) is the Congestion Management Agency for San Mateo County. As such, C/CAG is responsible for administering the state-mandated Congestion Management Program, setting state and federal funding priorities for improvements affecting the San Mateo Congestion Management Program and preparing the Countywide Transportation Plan. The C/CAG-designated Congestion Management Program roadway system in Brisbane includes US 101 and Bayshore Boulevard.

Transportation Demand Management Guidelines

In January 2022, C/CAG adopted a new transportation demand management (TDM) policy to reduce the number of new vehicle trips generated by new land development. The policy generally applies to developments that generate 100 or more average daily trips. Developments that meet the threshold must develop and implement a TDM plan using a land use-specific C/CAG checklist identifying appropriate strategies and their corresponding trip reduction credits. The trip reduction credits used in C/CAG's TDM policy are intended for CMP compliance.

As described further under Local Plans and Policies, the City of Brisbane recently updated its TDM ordinance to align with and implement C/CAG's TDM requirements. As discussed in the City's TDM Ordinance, "Projects which are consistent with the City's TDM Ordinance are considered consistent with C/CAG's CMP TDM Policy" (Municipal Code Section 10.52.010(J)).

2013 Candlestick Interchange Project Study Report (PSR) and Bi-County Transportation Study

The San Francisco/San Mateo Bi-County Transportation Study was originally undertaken in 2001 to anticipate and address development-related transportation challenges expected to occur over the next 20 years in San Francisco and San Mateo Counties. The study was updated in 2012, and the final report was released by the San Francisco County Transportation Authority (SFCTA) in 2013 with the purpose of re-evaluating transportation improvements needed to address future growth demands. The study takes a broad look at the totality of proposed development with the purpose of identifying regional, multimodal transportation project investments that will be needed to support future growth and existing neighborhoods. It aims

to build broad consensus on such a project list toward creating a multi-jurisdictional and shared public and private funding strategy and prioritization.

Developments included in the Bi-County Study were the Candlestick Point–Hunters Point Shipyard (CPHPS), Executive Park, Visitacion Valley/Schlage Lock (now known as Baylands North), and Brisbane Baylands. The final report for the Bi-County Transportation Study recommended the following transportation improvements:

- US 101 Candlestick Interchange Re-Configuration
- Geneva Avenue Extension from Bayshore Boulevard to the US 101 freeway
- Harney-Geneva Bus Rapid Transit Line
- T-Third Street Light Rail Extension (Segment "S")
- Bayshore Caltrain Station Re-Configuration
- Bicycle-Pedestrian Connections
- Area-Wide Traffic Calming Program

The Bi-County funding strategy determined "fair-share" contributions from public and private entities involved in the Bi-County Transportation Study Area. The public share of responsibility was comprised of growth in background trips (the difference between 2030 and 2005), while the private share of responsibility was determined based on the anticipated number of trips generated by each new development.

Parallel to the Bi-County Transportation Study, the City of Brisbane completed a Project Study Report (PSR) for the Candlestick Interchange that considered reconfiguration of the interchange into a compact diamond, with Geneva Avenue as a six-lane local roadway with bike lanes.

San Mateo County Comprehensive Bicycle and Pedestrian Plan

The San Mateo County Comprehensive Bicycle and Pedestrian Plan was developed by C/CAG with support from SMCTA to identify a countywide backbone bicycle network that links regionally significant destinations across local jurisdictions with the goal of addressing gaps between city boundaries and providing continuous, low-stress bikeways across the county.[157] This backbone network includes Sierra Point Parkway as a part of a north-south connection via the Bay Trail and an east-west connection via Guadalupe Canyon Parkway, Bayshore Boulevard, Tunnel Avenue, and Lagoon Road. The Countywide Bicycle and Pedestrian Plan identifies that Class I pathways along Lagoon Road and Sierra Point Parkway are medium

[157] San Mateo County Comprehensive Bicycle and Pedestrian Plan 2021, C/CAG. Accessed here by Fehr & Peers October 14, 2024: https://ccag.ca.gov/programs/transportation-programs/active-transportation/.

priority projects to address the existing high stress roadway segments for bicyclists that create gaps in the low-stress backbone network.

The following lists relevant goals and policies:

Goal 2: More People Riding and Walking for Transportation and Recreation

Policy 2.6: Serve as a resource to county employers on promotional information and resources related to bicycling and walking.

Goal 4: Complete Streets and Routine Accommodation of Bicyclists and Pedestrians

Policy 4.1: Comply with the complete streets policy requirements of Caltrans and the Metropolitan Transportation Commission concerning safe and convenient access for bicyclists and pedestrians, and assist local implementing agencies in meeting their responsibilities under the policy.

Policy 4.5: Encourage local agencies to adopt policies, guidelines, standards, and regulations that result in truly bicycle-friendly and pedestrian-friendly land use developments, and provide them technical assistance and support in this area.

Policy 4.6: Discourage local agencies from removing, degrading, or blocking access to bicycle and pedestrian facilities without providing a safe and convenient alternative.

Bay Trail Regional Plan

The San Francisco Bay Trail is a planned 400-mile recreational corridor that will encircle the waterfront region of the San Francisco and San Pablo Bays. The Bay Trail consists of a network of hiking and bicycling trails that will connect the shorelines of all nine Bay Area counties. ABAG adopted the Bay Trail Regional Development Plan in 1989 in response to Senate Bill 100.

The 2005 Gap Analysis Study prepared by ABAG for the entire Bay Trail area attempted to identify the remaining gaps in the Bay Trail system; classify the gaps by phase, county, and benefit ranking; develop cost estimates for individual gap completion; identify strategies and actions to overcome gaps; and present an overall cost and timeframe for completion of the Bay Trail system. Within the Baylands, the 2005 Gap Analysis Study proposes to connect existing Bay Trail segments that are located within and north of the Baylands by completing the trail from its current southern gap terminus at Sierra Point Parkway, along the eastern edge of the Baylands and then extending the trail along the waterfront of Candlestick Point State Recreation Area.

City/County Association of Governments of San Mateo County (C/CAG) Countywide Local Roadway Safety Plan

C/CAG published a draft Local Roadway Safety Plan in April 2024 with the goal to improve safety on roadways across San Mateo County (SMCCAG 2024). This plan identified areas that are most in need of design improvements and provided a list of draft priority location maps which show the different priority areas within a vicinity broken down by travel mode and road type. Every intersection on Bayshore Boulevard within Brisbane is identified as a "Priority Location," with Bayshore Boulevard at Main Street, San Bruno Avenue, and Tunnel Avenue being the top three locations for safety interventions in the City of Brisbane.

The Local Roadway Safety Plan identifies a set of engineering countermeasures that should be implemented across the city and for specific intersections along Bayshore Boulevard. While the Safety Plan does not identify a suite of countermeasures specifically for this corridor, it identifies the corridor as a "Motor Vehicle Emphasis," a "Bicycle Emphasis," and "Pedestrian Emphasis," needing improvements to address safety issues for each of these travel modes. The Bayshore Mobility Plan is intended to address the priority areas identified for Bayshore Boulevard and recommends the implementation of recommended countermeasures that are feasible for the corridor.

San Mateo County Safe Routes to School High Injury Network Report

C/CAG published its Safe Routes to School High Injury Network Report in June 2022, identifying road network segments with high rates of pedestrian and bicycle collisions as a means for prioritizing future infrastructure improvements. The analysis considers historic collisions in San Mateo County and calls for prioritizing those with greater severity and those involving youth or active-mode victims. The report also details demographic and geographic data on who is being injured or killed in crashes countywide, as well as other information breaking down collision trends. **Figure 4.8-6** shows the results of the report's analysis within the City of Brisbane. **Table 4.8-4** identifies streets within the Baylands and Bayshore School District that are identified as part of the Youth-Based High Injury Network.

Table 4.8-4: San Mateo County Safe Routes to School High Injury Roadway Network in the Vicinity of the Baylands

City of Brisbane	City of Daly City
Bayshore Boulevard	Geneva Avenue
Southern portion of Tunnel Avenue	Local Streets south of the Bayshore School
Lagoon Road	Rio Verde Street
	Acacia Street
	Oriente Street
	Schwerin Street

SOURCE: Alta Planning + Design, *San Mateo County Safe Routes to School High Injury Network Report*, June 2022

San Mateo County Office of Education Safe Routes to School Program

The San Mateo County Office of Education (Office of Education) began its Safe Routes to School initiative in 2014 in an effort to encourage and enable school children to walk or bike to school safely. The program, funded by the City/County Association of Governments of San Mateo County (C/CAG) and the California Transportation Commission, has the goal of engaging with students and the overall community through programs, activities, and small-scale infrastructure improvements to generate excitement and confidence in students' ability to get to school safely via active transportation. The program has seen increased school participation throughout its existence, and schools are able to participate in a wide variety of events and educational programs.

San Mateo County Creating Safer Streets near Schools Report

This report, created by the organization "Get Healthy San Mateo County," highlights priority areas of concern and schools within areas that have experienced a history of high bicycle and pedestrian collisions, noting where these areas coincide with neighborhoods that have high rates of poverty. The report identifies specific opportunities for action as well as policies that could be implemented to increase safety around school zones.

The report underscores the importance of inclusive and equitable transportation design to create streets that allow all to safely travel, stating "*Equitable transportation investments in street design, traffic calming measures, and programs such as Safe Routes to School ensure that all communities have healthy transportation options*." The Bayshore School has been identified as a priority Public Elementary School as well as a school that has a history of high bicycle and pedestrian collisions. The following are identified as actions that could be undertaken to improve safety within the transportation network around schools:

- Prioritize infrastructure improvements for student drop-off and pick-up zones, high collision intersections, and mid-blocks.
- Implement consistent street design guidelines to accommodate walking, biking, and driving.
- Increase knowledge of existing grant opportunities available for transportation safety improvements.
- Improve collaboration across schools, cities, and San Mateo County.
- Prioritize existing funding for schools in high collision and high poverty areas.

d. City of Brisbane Plans, Ordinances, and Regulations

General Plan

Chapter VI: Circulation Element

Policy C.1: Design the City's roadway system to emphasize mobility for Brisbane residents and businesses, accommodate bicycle and pedestrian in addition to vehicular movement, and provide for comfortable and safe travel within the community to shopping, employment, and recreation, as well as to transit and the Highway 101 freeway.

Program C.1.a: Consult with Caltrans, the Metropolitan Transportation Commission, San Francisco Transportation Authority, San Mateo County Transportation Authority, C/CAG, and others to develop and fund programs including physical improvements, enhanced use of transit, and transportation demand management, to maximize the ability of the 101 freeway to accommodate regional through traffic.

Program C.1.b: Develop design plans for Bayshore Boulevard, the Geneva Avenue extension, and interchanges along the 101 freeway that address the effects of regional through traffic within Brisbane and enhances mobility for Brisbane residents and businesses through a combination of roadway and intersection, transit, bicycle, and pedestrian facility improvements that would not cause a substantial increase in vehicle miles traveled (VMT) on Bayshore Boulevard or other routes through the City. As part of this design plan, evaluate (1) whether changes in design speeds along Bayshore Boulevard could improve mobility within the City; (2) the feasibility of shifting a portion of regional through traffic from Bayshore Boulevard onto other routes, such as Sierra Point Parkway by extending that roadway north to the US 101 freeway interchange at Beatty Avenue, and (3) appropriate routing of trucks to and from the Crocker Park area.

Program C.1.c: Prepare, adopt, and implement a mobility improvement fee program to fund the multi-modal improvements called for in the design plan for Bayshore Boulevard and interchanges along the 101 freeway.

Policy C.2: The level of service objective for principal and minor arterial streets within the City is LOS "D."

Policy C.3: Design turning movements and traffic signal timing at intersections so as to avoid the queueing of vehicles at intersection from backing up and adversely affecting operations at another intersection. Design turning movements and traffic signal timing at freeway interchanges to avoid queueing of vehicles from the intersection onto the freeway mainline.

Policy C.4: Plan for an additional east–west corridor to redirect non-destination traffic away from Bayshore Boulevard and to provide more direct access to Highway 101.

Program C.4.a: Pursue an extension of Geneva Avenue, connecting with the Candlestick Highway 101 Interchange that provides for bus rapid transit and connection to the Bayshore Caltrain station.

Program C.4.b: Consult with Caltrans in the design of the Candlestick Highway 101 Interchange to assure the best connection with the Geneva Avenue Extension.

Program C.4.c: Require that all east–west corridor rail crossings are grade-separated (i.e., not at-grade) to the extent permitted by law.

Policy C.5: Continue to upgrade north–south arterial and collector streets while providing the appropriate level of service.

Program C.5.a: Require the upgrade of Tunnel Avenue to current codes and safety standards.

Policy C.17: Maintain traffic flow and continue to improve arterial streets to accommodate vehicular, bicycle, and pedestrian movement.

Program C.17.a: Limit and control the number and location of driveways into arterial streets as needed to maintain mobility within the City. Encourage adjacent properties to develop common access. See also Program C.22.2 in Complete Streets section.

Program C.17.b: Use landscaped medians and islands to direct and channel traffic, where needed to provide for mobility for Brisbane residents and businesses, as well as to provide safe separation and visual respite.

Policy C.21: The City shall provide for the development of Complete Streets consistent with Government Code Sections 65040.2 and 65302 and subsequent applicable Complete Streets legislation) to meet the needs of all users of "streets, roads and highways". Such users include bicyclists, children, youth, families, persons with disabilities, motorists, movers of commercial goods, pedestrians, users of public transportation, seniors, and first responders.

Policy C.22: Integrate Complete Streets infrastructure and design features, such as sidewalks, bikeways and transit stops, into street design and construction to create safe and inviting environments for people to walk, bicycle and use public transportation.

Program C.22.a: Review and where needed, update the City's engineering design standards to implement Complete Streets infrastructure elements.

Program C.22.b: Incorporate Complete Streets infrastructure elements into new streets, street retrofits and certain maintenance projects to encourage multiple modes of travel,

as appropriate to the context and determined reasonable and practicable by the City. Depending on the context, these elements may include:

- Infrastructure that promotes a safe means of travel for all users along the public right-of-way, such as sidewalks, shared use of paths, bicycle lanes, and paved shoulders;
- Infrastructure that facilitates safe pedestrian crossings of the right of way, such as accessible curb ramps, crosswalks, refuge islands, and signals to meet the needs of children, people with disabilities and the elderly;
- Street design features that promote safe and comfortable travel by pedestrians, bicyclists, and users of public transportation, such as traffic calming features and physical buffers between vehicular traffic and other users;
- Inclusion of amenities that improve the comfort and addresses the safety needs of pedestrians and bicyclists, such as, but not limited to, signs, pavement markings, pedestrian-scale lighting, benches, seat walls, bike lockers and racks;
- Improvements to public transit and multi-modal connections, to enhance City-wide transit access and connections to regional destinations;
- Minimizing vehicular ingress and egress points on major arterials and consolidating private driveway entries to enhance bicycle, pedestrian, and automobile safety along these arterials;
- Inclusion of street trees and other landscaping features, to enhance the appearance of the streetscape and to encourage pedestrian and bicycle use. Landscaping should use San Bruno Mountain native plants where feasible. In any case, plants should be non-invasive and drought resistant. (See also the Green Streets section of this element.)
- Balance on-street parking as appropriate to the context, to promote the Complete Streets Act goals and encourage economic vitality. (See also the Parking section of this element.)

Policy C.26: Continue to connect Brisbane's bikeway and pedestrian system to the County and regional networks.

Policy C.29: Provide for the safety of bicyclists by dedicating bikeways where practicable, by installing appropriate signing and striping, and by maintaining the pavement.

Program C.29.a: Install as many bikeways as can safely be accommodated and are economically feasible.

Policy C.30: Require new development and redevelopment to plan for and construct bikeways and/or bicycle parking facilities, as determined reasonable and practicable by the City.

Policy C.31: All new arterial streets and any existing arterials that are improved should provide for bicycle transportation.

Program C.31.a: As a part of the budget and Capital Improvement Program development, seek opportunities to upgrade existing bikeways and to install new bikeways.

Policy C.32: Provide or require bicycle parking facilities at major destination points.

Program C.32.a: Include bicycle lockers in park-and-ride facilities.

Program C.32.b: Encourage business and employment centers to provide bicycle-parking facilities for their employees.

Program C.32.c: Design and install bicycle-parking facilities to meet best current engineering practices.

Policy C.34: Maximize safe pedestrian facilities and access to all areas of the City, as reasonable and feasible.

Program C.34.b: Consider opportunities to enhance and expand pedestrian access between Central Brisbane, the Caltrain station, Sierra Point Marina and other regional destinations and transit connections.

Program C.34.c: For newly designed and constructed sidewalks, disallow automobile parking thereon; and for existing sidewalks adjacent to rolled or vertical curbs, encourage residents to park such that sidewalks are kept clear for pedestrians in accordance with the Americans with Disabilities Act (ADA) width standards.

Policy C.35: Require pedestrian amenities with new development and expansion of existing uses, as appropriate.

Policy C.36: Seek opportunities to install and improve transit facilities, establish multi-modal connections and increase the service network.

Program C.36.c: Support, improve, and expand transit to serve the business and residential communities and provide connections to major transportation hubs.

Program C.36.d: Cooperate with San Mateo County Transit District (SamTrans), and other appropriate agencies, to establish bus rapid transit (BRT) systems where practicable.

Program C.36.g: Work with SamTrans to install improvements at existing bus stops and designated routes.

Program C.36.i: Require new development that are subject to the City's transportation demand measures (TDM) ordinance to also incorporate measures that facilitate Complete Streets compliance measures, such as transit stops, shuttle stops, and bicycle facilities.

Policy C.37: Plan for park-and-ride facilities at the Caltrain Station and other major transit stops.

Policy C.41: Maintain an appropriate amount of off-street parking in commercial areas.

Program C.41.a: Review the parking regulations for office, commercial and industrial uses and consider setting minimum and maximum parking standards where transit alternatives are readily available.

Policy C.44: Consider potential effects on mobility and emergency evacuation in making land use decisions.

Policy C.45: For vacant subareas without existing infrastructure, require circulation plans and multi-modal transportation analyses to be submitted as a part of any development application.

Policy C.46: Consider transit use and facilities as well as Transportation Demand Management Programs in making land use decisions.

Policy C.48: In conjunction with new development and expansion of existing uses, require that new streets and any existing private streets serving the property be improved to City standards and offered for dedication as public streets.

Policy C.51: Incorporate Green Streets best practices, as appropriate to the context, for new streets and street retrofits, to enhance the pedestrian and bicyclist experience, to promote low impact development (LID) consistent with state water board initiatives to reduce the impacts of development on storm water resources and to enhance the natural environment.

Policy C.52: For new multifamily, mixed use or commercial development projects subject to discretionary review, as part of the design review permit process, incorporate Green Streets, as determined reasonable and practicable by the City.

Policy C.53: In the design and approval of a specific Green Street, the following factors will be considered, as may be applicable:

- Context and design intent for the area or site;

- Site and environmental constraints such as soil type, sun and wind exposure, presence of utilities, view sight lines and view corridors;
- On-going water needs and drought tolerance;
- Diversity of plantings to reduce the potential for mass die-offs due to pests or disease which may impact specific species;
- Adequate soil volume and location of the species within a storm water treatment unit, where applicable.

Brisbane Municipal Code

Chapter 10.52, Transportation Demand Management

The City of Brisbane replaced its prior Transportation System Management program with a Transportation Demand Management (TDM) ordinance (Municipal Code Chapter 10.52) in 2023 to prepare for land use and transportation changes and to align its policies with county and state requirements. The TDM strategy provides uniform guidance to project applicants to achieve consistency with the City's General Plan and CCAG's Congestion Management Program. The Proposed Project would be subject to the highest tier of compliance (Tier 3) and be required to implement all TDM measures presented in **Table 4.8-9**. In addition, the TDM ordinance outlines monitoring and reporting requirements, which includes submitting initial and annual self-certification reports and annually monitoring progress toward a target employee drive-alone mode share. The TDM Measures for the project have been designed to be consistent with the City's TDM Ordinance.

Chapter 12.04, General Construction and Repair

Any encroachments into the City's right-of-way are required to comply with Brisbane Municipal Code Chapter 12.04, which is intended to promote traffic safety. The key provisions of this Chapter include the following:

- **Section 12.04.010** requires that all construction activities that would "open, tear up, break out or excavate in any roadway, street, thoroughfare, sidewalk, parking strip or public easement for the purpose of installation, maintenance or repair of underground facilities or for any other purpose" to obtain a permit from the City of Brisbane. Additionally, placement of traffic control, warning, or guidance devices is not permitted to obstruct or divert traffic, interfere with public rights-of-way, including improved streets, sidewalks, and unimproved public rights-of-way, except as allowed by City Code and traffic ordinances, without obtaining a permit for such work from the City.

- **Section 12.04.020** requires the submittal of a written application to the city engineer on forms furnished or approved by the city engineer.[158] The application is required to contain such information as the city engineer shall require, including plans and profiles showing work to be done, location, limits of work, location of pavement replacement types, together with such further information as the city engineer may require.
- **Section 12.04.060** states that once work has been started, it is to be diligently and continuously prosecuted until completed. All work is required to be completed within the time specified in the permit unless an extension of time for good cause shown is granted by the city engineer.
- **Section 12.04.070** requires that all work be performed in a neat and workmanlike manner and so programmed as to cause the minimum of interference with traffic and inconvenience to the public. Free and unobstructed access is to be provided to all mailboxes, fire hydrants, water gates, valves, manholes, drainage structures, and/or other public service structures and property as may be required for emergency use. Such facilities may not be removed or relocated without proper coordination with the agency charged with their control and maintenance.

  Work areas are to be confined so as to not unnecessarily obstruct roadways and walks.

  Temporary roadways, driveways, and walks for vehicles and pedestrians are to be constructed where required. Upon written application, streets, driveways, or areas may be closed for limited periods where in the opinion of the city engineer, the public interests can best be served thereby. When required by the city engineer, the permittee shall give notice to the owner or occupant of all property where access will be impaired. The work shall be coordinated with other agencies or concerns working in the area to the satisfaction of the city engineer.
- **Section 12.04.080** requires permittees to provide and maintain fences, barricades, warning and directional signs, flares, red lights, watchmen, and flagmen as may be required by "existing laws and regulations and as deemed necessary by the city engineer, to insure full and complete safety to the general public."
- **Section 12.04.110** requires replacement of pavement with a standard type as indicated on the permit. In addition, the edges of all trenches and excavations are required to be properly trimmed and squared up, and all loose materials are to be removed before pavement is placed. Temporary surfacing acceptable to the city engineer or as indicated in the permit is required to be installed on the same or next working day after backfilling has been completed or when directed by the city engineer.

[158] Brisbane's encroachment application, including general encroachment provisions and requirements for Traffic Control Plans can be found at: ENCROACHMENT PERMIT (brisbaneca.org)

Section 12.24.010, Street Design Standards

Brisbane Municipal Code 12.24.010 states that the City of Brisbane has adopted Caltrans standards for street design and sets conditions for general street design, such as maintaining a minimum 20-foot street width for streets without on-street parking. This chapter also sets standards for curb-cuts and driveways, including setting a minimum residential curb cut widths of 12 feet for single-family home driveways and 18 feet for multi-family buildings in addition to standard 1.5-foot flares on each side.

Street and Parking Standards and Traffic Control Plans

The City of Brisbane Municipal Code Chapter 12.24 states that the City of Brisbane has adopted Caltrans standards for street design and sets conditions for general street design, such as maintaining a minimum 20 feet street width for streets without on-street parking. This chapter also sets standards for curb-cuts and driveways, including setting minimum residential curb cut widths of 12 feet for single-family home driveways and 18 feet for multi-family buildings in addition to standard 1.5-foot flares on each side.

The City of Brisbane Municipal Code Chapter 17.34 provides guidance on off-street parking requirements and sets minimum standards for the amount of parking spaces required for new developments; however, the Specific Plan sets standards for the maximum amount of parking that would be permitted consistent with AB 2097 and regional GHG emission reduction strategies and would not be subject to the City's minimum parking standards. AB 2097 prohibits public agencies from imposing any minimum automobile parking requirement on most development projects located within one-half mile of a major transit stop.

Encroachment Permit Application

The City of Brisbane's encroachment permit application and standard requirements can be found at https://www.brisbaneca.org/media/39316.

Standard Requirements for Encroachment Permits

Brisbane's encroachment permit application set forth standard requirements that are applied to all permits, including the following key requirements relevant to the analysis of Baylands construction impacts:[159]

1. All work shall be done in conformance with the approved plans.

4. Construction noise limitations shall be as specified in BMC 8.28.60 A and 8.28.60 B.

[159] Numbering of standard requirements for encroachment permits does not include requirements that are not relevant to Baylands development.

6. Erosion and sediment control measures shall be in place and operational during the rainy season, defined by the Municipal Code as October 15 through April 15. An effective erosion and sediment control plan shall be prepared, submitted to the City for review and approval, and implemented, prior to the start of the rainy season. Temporary erosion and sedimentation controls shall remain in place until permanent post construction controls have been established.
7. Appropriate construction and post construction best management practices (BMPs) are required to control storm water quality impacts. Erosion and sediment control BMPs to be used during construction shall be selected as appropriate from the California Construction BMP Handbook (1993), ABAG Manual of Standards for Erosion and Sediment Control Measures (1995), or San Francisco Bay Regional Board Erosion and Sediment Control Field Manual. Implement permanent post construction controls as appropriate and ensure ongoing operation and maintenance of such controls.
8. All projects with 5 acres or more of disturbed area must file a Notice of Intent (NOI) with the State Water Resources Control Board to obtain coverage under the State General Construction Activity NPDES Permit and a Storm Water Pollution Prevention Plan (SWPPP) must be prepared and implemented. A copy of the project's NOI and SWPPP shall be submitted to City prior to issuance of permit.
9. Work shall at all times be in conformance with the current Stormwater Management Plan as prepared by the San Mateo Countywide Stormwater Pollution Prevention Program and approved by the San Francisco Bay Regional Water Quality Control Board. City reserves the right to require immediate additional measures if in the City Engineer's sole judgment such additional measures are necessary.
10. Discharge of all potential pollutants, including but not limited to, petroleum products, solid wastes, and construction materials and pumped groundwater that occur on-site during construction shall be controlled and prevented from discharging into the storm drain system. Appropriate construction site BMPs shall be continuously employed.
11. Permittee shall obtain prior approval from the city's utility division before discharging any fluids into City sanitary sewer system. This flow shall be metered, and a volume and strength charge will be assessed.
12. Trucks delivering materials shall not block public traffic at any time except for deliveries incorporated into an approved traffic control plan.
13. Construction equipment will be allowed to transit public rights-of-way with proper traffic control, including flagging, in order to access jobsites. Permittees are required to provide proper safety measures at all times. No open trenches are allowed next to live traffic without proper safety controls, including K-rail, trench shoring, and other measures necessary to protect motorists.

14. All trenches in existing pavement are to be neatly saw cut. Trenches not protected by K-rail are required to have a nonskid steel traffic plate placed over the trench at the end of every workday. Specific design requirements are set for the edges of traffic plates perpendicular and parallel to traffic along with requirements to prevent such plates from shifting. Trench plates are not permitted to be left in any one location more than 5 working days. Trenches protected by K-rail may be left open at night provided that plastic barricade fencing or other barricade acceptable to the City Engineer is used to secure the open trench and prevent access from unauthorized personnel during non-work hours. The maximum length of any open or traffic plated trench is not permitted to exceed 500 feet at any time.
15. Rocksaws, trenchers, boring equipment, and any other equipment which does not utilize a bucket to perform excavation, are not allowed without the specific permission of the Director of Public Works/ City Engineer.
20. Dust created by any grading, trenching, or excavation operation shall be controlled per Section 15.01.330 of the Brisbane Municipal Code and to the satisfaction of the City.
21. Underground Service Alert shall be contacted 48 hours prior to start of work, and all excavation work shall be fully in compliance with §4216 et seq. of the California Government Code.
23. Should the Contractor damage a subsurface installation, regardless of whether or not the facility was properly marked, the Contractor shall immediately notify the utility operator of the damaged facility, and shall not backfill the excavation until the operator has had time to repair its facility.
27. Prior to placement of any pavement overlay that may be required as a condition of the Permit, the Contractor shall mark the location of surface access points to underground facilities to facilitate their ultimate adjustment to grade, to the satisfaction of the Director of Public Works/City Engineer or the Public Works Inspector.
28. This permit is valid only for work in the City of Brisbane. Applicant shall obtain necessary easements from private property owners where work is proposed outside the City's right-of-way.

Traffic Control Plans

In addition to the above requirements, preparation and implementation of a traffic control plan is required for work within Brisbane rights-of-way. Key requirements include the following:

- Placement of temporary traffic control signs and devices shall not fully obstruct pedestrian or bicycle paths unless a closure and temporary access route or detour is approved by the City Engineer.

- Requirements for All City Highways
    - No work is to be performed outside of normal work hours from 8:00 a.m. to 5:00 p.m., Monday through Friday. For work hours other than specified, a special request in writing must be submitted for approval. No work is to be done on the weekend without a special weekend permit issued by the Director of Public Works/City Engineer.
    - The Contractor's traffic control plan shall provide two-way traffic on all two-way streets at all times. If required to maintain two-way traffic, the contractor shall provide flaggers with radios at each end of the construction detour.
    - "Standard" plans may be used when the activity site is consistent with typical work zone layouts shown in the latest edition of the Work Area Traffic Control Handbook or with typical applications shown in the latest edition of the California Manual for Uniform Traffic Control Devices.
    - Depending on location, the City may require the submittal of typical plans with site-specific details, including street names, existing traffic control signals/devices, intersections, driveways, etc.
    - Advance warning signs for parking restrictions and lane closures/detours shall be placed 72 hours in advance of implementing traffic control.
    - Highways with restricted work hours (work is permitted only between 9 a.m. and 4 p.m.), no work, traffic control, lane closures, or traffic detours will be allowed within traffic lanes of the following highways before 9:00 a.m. or after 4:00 p.m. include Bayshore Boulevard, Guadalupe Canyon Parkway, Valley Drive, North Hill Drive, Tunnel Avenue, Lagoon Way, and Sierra Point Parkway.
- Requirements for Highways with Designated Class I, II, or IV Bike Lanes
    - Traffic control plans that propose closing all or a portion of the above bike lanes may not use W16-1 (Share the Road) and W11-1 (bicycle graphic) at speeds > 35 mph.
    - When the total available travelway outside the road closure is ≥ 15′ in width, then the TCP may implement a speed reduction to 35 mph and use the W16-1 and W11-1.
    - When the total available travelway outside the road closure is ≥ 13′ in width, then the TCP may implement a speed reduction to 25 mph and use the W16-1 and W11-1.
    - When the total available travelway outside the road closure is < 13′ in width, the TCP shall implement a bicycle detour plan.

    - Where the existing bike lanes include a rumble strip section, the width of that section may not be counted toward "total available travelway."

- Restricted Conditions (TCP must be prepared by a licensed professional)
    - Traffic control plans for the following highways and for the listed conditions shall be signed and stamped plans prepared by a California licensed civil engineer or traffic engineer:
        - Bayshore Boulevard
        - Guadalupe Canyon Parkway
        - Valley Drive
        - Lagoon Way
        - Sierra Point Parkway
    - Night Work
        - Full road closure

Complete Streets Safety Assessment

A portion of the Bayshore Boulevard corridor was studied in 2022 as part of a Complete Streets Safety Assessment conducted by the Safe Transportation Research and Education Center ("SafeTREC") at University of California, Berkeley. Staff from SafeTREC conducted a benchmarking analysis of the City's practices, policies, and programs, and a team of three complete streets safety experts from Fehr & Peers conducted a walking audit and produced recommendations for improvements along the corridor from San Bruno Avenue to Old County Road. The final recommendations of the study proposed a road diet along this section of the corridor reducing the number of through lanes along Bayshore Boulevard from four (two in each direction) to two (one in each direction), providing a separated multi-use path along the west side of the roadway, among other improvements.

4.8.4 RELEVANT SPECIFIC PLAN PROVISIONS

The Specific Plan sets forth plans for roadways and streetscapes, an "active transportation network" consisting of bicycle and pedestrian facilities, access to transit and a shuttle system, and parking requirements.

a. Roadway Network

Connections to two north–south regional highway facilities, US 101 and Bayshore Boulevard, which form the eastern and western boundaries of the Specific Plan area are to be provided.

- The **US 101 Freeway** would continue to serve as the key regional vehicular access to the Baylands with two major access points:
    - The Candlestick Interchange at Harney Way/Alana Way, generally serving the northern portions of the Baylands; and
    - The Sierra Point Interchange at Sierra Point Parkway, generally serving the central and southern portions of the Baylands.
- **Bayshore Boulevard** would also provide regional access to the Baylands, providing access to the existing Muni Light Rail K/T Line as well as multiple existing and nearby Muni and SamTrans bus services.

In addition, the Geneva Avenue extension would be constructed, including a bridge over the Caltrain right-of-way. The Specific Plan organizes roadways within the Baylands using General Plan functional classifications with two additional classifications unique to the Baylands: green shared street and access road (see **Table 3-3** and **Figure 3-28** through **Figure 3-43**).

b. Active Transportation Facilities

An active transportation network will be developed consisting of an internal network of shared-use paths, bicycle facilities, and sidewalks compliant with the ADA that will connect to existing local and regional routes. Pedestrian facility types are described in **Table 3-4**. The Baylands pedestrian network is illustrated in **Figure 3-44**. Baylands bicycle and micro-mobility facility types are identified in **Table 3-5** and illustrated in **Figure 3-45**.

A fare-free shuttle network will be provided to transport Baylands residents and workers throughout the site and connect the Baylands to downtown Brisbane and existing transit routes. Shuttle service is proposed to be established in two phases, initially providing an internal Baylands route and weekday connections to downtown Brisbane as illustrated in **Table 3-6** and **Figure 3-46**.

In addition to providing a roadway network, pedestrian and bicycle facilities, and transit services described above, the Specific Plan proposes the preparation of Transportation Demand Management (TDM) Plans for each applicable site-specific development project as it undergoes site-specific development review. The purpose of these TDM plans is to encourage and incentivize travel other than via use of single-occupant vehicle trips in accordance with San Mateo County's Congestion Management Program requirements. The Specific Plan sets a

project-wide trip reduction target of a minimum of 25 percent below baseline Average Daily Traffic (ADT).

c. Transit

The Specific Plan provides for vehicular, bicycle, and pedestrian access to the Bayshore Caltrain station. A drop-off/pick-up area is proposed within a plaza to be constructed adjacent to the station, which will also facilitate pedestrian and bicycle access to the station. The Specific Plan also proposes establishing shuttle service to connect residential and employment areas to open space/areas and amenities within the Baylands (see **Table 3-6** and **Figure 3-23**).

d. Parking Requirements

The Specific Plan proposes eliminating minimum parking requirements for individual site-specific development projects and establishing a maximum limit on the number of parking spaces permitted within the Baylands. The purpose of a maximum parking space requirement is to reinforce use of alternate forms of mobility and maximize the efficient use of land. A maximum permitted number of parking spaces is assigned to each District within the Specific Plan area totaling an overall maximum of 11,000 off-street parking spaces.

This is generally consistent with recent changes in state law which established limits on the number of parking spaces an agency can impose in transit priority areas. Assembly Bill No. 2372 (2017–2018 Reg. Sess.) established limits on the number of parking spaces a city or county could impose on multi-family housing developments located on an urban infill site in a transit priority area or within one-half mile of a major transit stop (Government Code Section 65917.2(a)(1), (c)). Assembly Bill No. 2162 (2017-2018 Reg. Sess.) prohibited local governments from imposing minimum parking requirements on low-income housing projects built within one-half mile of a public transit stop (Government Code Section 65654).

4.8.5 ADDITIONAL PROPOSED TRANSPORTATION IMPROVEMENTS

a. Bayshore Mobility Plan

The Plan Bayshore Mobility implements General Plan Amendment GP-1-19, which states that the City's roadway system is to be designed "to emphasize mobility for Brisbane residents and businesses, accommodate bicycle and pedestrian in addition to vehicular movement, and provide for comfortable and safe travel within the community to shopping, employment, and recreation, as well as to transit and the Highway 101 freeway." To implement this policy, General Plan Program C.1.b calls for a plan to reconfigure Bayshore Boulevard that addresses the "[…] effects of regional through traffic within Brisbane and enhances mobility for Brisbane residents and businesses through a combination of roadway and intersection, transit, bicycle,

and pedestrian facility improvements that would not cause a substantial increase in vehicle miles traveled (VMT) on Bayshore Boulevard or other routes through the City."

The Bayshore Mobility Plan builds on the 2022 Complete Streets Safety Assessment and expands its recommendations north from Old County Road to Geneva Avenue to enhance mobility for Brisbane residents by:

- **Enhancing connectivity for residents and land uses abutting Bayshore Boulevard** such as the Sierra Point Trailer Park on the west side of Bayshore Boulevard just north of San Bruno Avenue.
- **Reducing the prominence of regional through traffic along Bayshore Boulevard**, making it more of a street serving Brisbane residents.
- **Redesigning Bayshore Boulevard as a multi-modal corridor** to increase the level of comfort and safety for all roadway users, including automobiles, emergency response vehicles, transit vehicles, trucks, bicycles, and pedestrians in accordance with General Plan Policy C.1 to "provide for comfortable and safe travel within the community to shopping, employment, and recreation, as well as to transit" and the recommendations of the 2022 Complete Streets Safety Assessment.
- **Increase connectivity between the Baylands and the existing City of Brisbane** for people traveling along and crossing Bayshore Boulevard.
- **Improve the look of the corridor**, providing opportunities for landscaping, gateway features, wayfinding, and other features that increase the prominence of the roadway as a local route for Baylands residents rather than a regional cut-through route.

From Geneva Avenue south to San Bruno Avenue, the Bayshore Mobility Plan would:

- Reduce the number of travel lanes from four (two in each direction) to two (one in each direction);
- Reduce the posted speed limit from 45 miles per hour (mph) to 35 mph;
- Widen sidewalks and add a multi-use Class I path on the west side of the corridor;
- Provide protected intersections at locations with vulnerable roadway users (such as school children at Bayshore and Main Street traveling to the proposed middle school within the Baylands); and
- Improve access control to local streets within the Baylands.

The Bayshore Mobility Plan is described in greater detail in Section 3.3.4, *Bayshore Mobility Plan*. The full text of the Bayshore Mobility Plan can be found in Appendix F to EIR Appendix F.1.

b. Supplemental Roadway Design Guidelines

The City of Brisbane has adopted the Caltrans Highway Design Manual to serve as its roadway design standards. While Caltrans' Highway Design Manual identifies ways in which those standards can be adapted to local land use contexts, the overall development intensity and network of streets proposed for Baylands development are distinctly different from the balance of Brisbane, and the land use contexts for which they were originally adopted by the City. As a result, roadway design guidelines were prepared to supplement City and Specific Plan roadway design standards and are intended to be implemented as part of the Specific Plan.

The Baylands Supplemental Design Guidelines, which can be found in Appendix E to EIR Appendix F.1, are largely based on Caltrans' *Design Information Bulletin 94 Complete Streets: Contextual Design Guidance* (DIB-94). The guidelines provide guidance and establish standards for complete streets, which in some cases supersedes the standards in the Caltrans' Highway Design Manual (Caltrans 2024b). The DIB-94 identifies best practices and standards for the development of Complete Streets facilities to support the design of comfortable and convenient streetscapes and provides minimum expectations based on context. California's Manual on Uniform Traffic Control Devices also provides standards and guidance related to the design of roadway facilities that all facilities shall be consistent with. In addition, these supplemental design guidelines incorporate guidance from Caltrans' Local Development Intergovernmental Review (LDIGR) Safety Review Practitioners Guide (Caltrans 2020b).

The following supplemental design guidelines are intended to guide the City of Brisbane through the detailed design review of roadway and transportation infrastructure plans for the Baylands and ensure that relevant standards are incorporated to reduce the potential for hazardous conditions for all roadway users:

- **Design Speeds:**
    - 35 miles per hour on Bayshore Boulevard and Geneva Avenue, Tunnel Avenue, Sierra Point Parkway, and Lagoon Road;
    - 25 miles per hour on other streets, except Green Local Streets, and within 500 feet of the proposed middle school; and
    - 15 miles per hour on Green Local Streets at all times and on all streets within 500 feet of the proposed middle school when children are present.
- **Speed Management.** Speed management techniques outlined in the Caltrans' DIB-94 (Caltrans 2024b) are required to transition between different place types, such as along Bayshore Boulevard from the Suburban place type character around Guadalupe Canyon Parkway to the Urban place type proposed by the Project.
- **Intersection Controls.** Intersection controls are required to follow guidance based on the functional classification of the intersecting roadways. Intersection controls are listed

based on the higher functional classification and are not duplicated for lower classification roadways. Engineering studies such as intersection warrants, sight distance analyses, and turning templates for trucks, buses, or other design vehicles are required to support any deviations from this guidance requested by applicants for site-specific development projects, subject to review and approval by the City of Brisbane City Engineer.

  - Regional Arterials – Traffic signals shall be provided at all intersections of regional arterials (Bayshore Boulevard and Geneva Avenue) with arterials or collectors. Local and green streets that intersect Regional Arterials shall be right-turn access only and stop-controlled with median buffers to prevent left-turns. Exceptions to this include locations where left-turns are required to facilitate access outside of the Baylands, including the intersection of Geneva Avenue and the Connector Road to Tunnel Avenue, where left-turns are required from eastbound Geneva Avenue to reach Tunnel Road, and the northernmost local street on Bayshore Boulevard, where an existing driveway has full access, and the Specific Plan does not propose to close this access.
  - Minor Arterials – Roundabouts shall be provided at the intersections of Lagoon Road with Tunnel Avenue and Sierra Point Parkway and at Tunnel Road and the Connector Road to Geneva Avenue. Collectors and local cross streets that intersect with Tunnel Avenue and Sierra Point Parkway shall be stop controlled as traffic volumes are expected to be substantially higher on the minor arterials than cross-streets, unless a traffic engineering study approved by the City Engineer demonstrates that an all-way stop is warranted.
  - Collectors – The intersection of two collectors shall include all-way stop control except for the intersections of Baylands Boulevard / Main Street and Baylands Boulevard / Frontage Road, where a traffic signal shall be installed due to their presence adjacent to major activity generators. Local and green streets shall be stop controlled as side streets when intersecting with collectors, unless a traffic engineering study demonstrates that an all-way stop is warranted.
  - Local Streets – The intersections of two local streets shall be all way stop controlled except for Roundhouse Circle, where all intersecting streets shall be side street stop controlled unless a traffic engineering study demonstrates that an all-way stop is warranted. Green Streets shall be stop controlled when intersecting with a local street.
  - Green Streets – Green Streets do not intersect with each other and thus shall follow the guidance listed above.

- **Shared Green Streets.** Because pedestrians, bicyclists, and vehicles would all mix within the same space, Shared Green Streets shall comply with the design guidelines presented

in FHWA's *Accessible Shared Streets* (FHWA 2017) to provide safety for all road users, including the following types of features:

- Clearly demarcated shared zones, furniture, comfort, and frontage zones.
- Gateway features that distinguish the shared street from adjacent conventional streets.
- Traffic calming measures, such as vertical deflection (e.g., raised crossings), horizontal deflection (e.g., chicanes), textured paving (e.g., cobbles), as well as the physical and visual narrowing of the field of vision for drivers to encourage slow speeds (defined as between 5 and 15 mph by FWHA).
- Frequent and visible signage to alert all road users of the low-speeds and presence of all other road users, including shared street signs and posted speed limits.
- Raised elements, including speed humps or tables and raised crosswalks, where appropriate to slow traffic along the roadway.
- Adequate spacing between driveways to individual buildings to ensure sight lines are not obstructed for vehicles entering or exiting the driveways on shared streets.
- Design of land uses to maintain average daily traffic on Share Green Streets of 1,000 vehicles or less with median vehicle speeds of 15 miles per hour or less. Monitor traffic volumes and speeds on green streets to ensure these metrics are met and implement additional features consistent with FHWA's guidance to slow traffic speeds and reduce the potential for cut through traffic if these metrics are not met.

- **Pedestrian Facilities.** Consistent with Caltrans' DIB-94, sidewalks shall include a six-foot minimum through zone and 12-foot total width (including buffer and frontage zone) with fronting residential and employment land uses. An eight-foot minimum through zone and 15-foot-total-width sidewalks shall be provided for blocks with active ground floor retail or adjacent to schools or other community uses. Sidewalks with a five foot through zone are appropriate for Green Streets, which provide shared space for people walking, and roadways such as Frontage Road that will primarily serve vehicle-oriented uses such as loading and parking access. Driveways shall cross sidewalks at sidewalk grade. Crosswalks shall be marked at all signalized intersections, at non-signalized locations adjacent to bus stops, and community destinations such as parks, schools, and active retail frontages, and spaced no more than 250 to 500 feet. Crosswalk locations and features shall be determined based on Section 6.0 of DIB-94 and HDM Index 105.6 Pedestrian Crossings, CVC Section 275, and CA MUTCD Section 3B.18 Crosswalk Markings, which provide guidance and requirements for the location and design of crosswalks.

- **Bicycle Facility Design.** Consistent with FHWA's Bikeway Selection Guide (adopted in Caltrans' DIB-94), arterial roadways with 35 miles per hour design speeds that have designated bicycle facilities shall have separated bike lanes or shared use paths (FHWA 2019). This includes Geneva Avenue, Tunnel Avenue, Sierra Point Parkway, and Lagoon Road. The widths of all bikeway facilities and the landscape buffers shall meet or exceed the minimum widths presented in Caltrans' DIB-94 and FHWA's Bikeway Selection Guide. Shared use pathways that will become part of the Bay Trail or connecting pathways shall be designed to meet Bay Trail standards.
- **Bus and Shuttle Stops.** SamTrans bus stops shall provide all the amenities recommended in the SamTrans' *Bus Stop Improvement Plan*, such as bus shelters, benches, and real-time information (SamTrans 2024). Bus stop placement, design, and amenities consistent with Caltrans' DIB-94 Chapter 7, as approved by the applicant transit agency and the City Engineer, including, but not limited to:
    - Paved and ADA accessible sidewalk or path to access the bus or shuttle stop to and from land uses that generate pedestrian foot traffic.
    - High-visibility crosswalks within 50 to 200 feet of bus and shuttle stops across all adjacent roadways to provide safe and convenient access per Section 6.1 of Caltrans' DIB-94. Crossings to be designed to include treatments consistent with the FHWA *Guide for Improving Pedestrian Safety at Uncontrolled Locations* (FHWA 2018).
    - Where transit stops interact with bike lanes on streets with frequent bus service or higher rates of bicycles, provide transit boarding islands.[160]
- **Driveways.** Driveways for vehicular parking and freight or commercial loading shall be as narrow as feasible to allow for access and shall be consolidated to minimize the number of conflicts with other roadway users. Residential driveways shall not exceed 10 feet wide for single-family, townhome, and low-rise residential buildings unless truck access is required, and shall not exceed 20 feet for higher density residential facilities.
    - Where a bicycle lane crosses a driveway bike lane, the same conflict striping treatment shall be provided that a bike lane receives through an intersection.
    - Driveways shall have adequate site distance to see oncoming vehicles, typically by providing driveways with the same daylighting treatment that intersections and uncontrolled intersections would receive. Site distance assessments would be conducted as required by the City Engineer to ensure that any parking, bus stop amenities, street furniture, or roadway curvature would not impede site distance.

[160] These facilities provide a dedicated waiting area for passengers while allowing a bike lane along the corridor to be continuous.

  - Driveways for site-specific developments are not to be provided on regional arterials and should be avoided to the extent possible on roadways with posted speeds greater than 25 miles per hour. Where driveways on roadways with posted speeds greater than 25 miles per hour cannot be avoided, such as along Tunnel Avenue or Sierra Point Parkway, driveways would be treated with countermeasures similar to Share Green Streets, including signage for exiting vehicles indicating that Cross Traffic Does Not Stop.

- **Loading Facilities.** Site-specific attached residential development and all commercial development shall designate on-site curbside space or convenient garage space designated to accommodate rideshare, taxi, commercial delivery, and other pick-up/drop-off activities.
  - Secure space for delivered goods shall be provided in sizes and types appropriate to the on-site use, such as a delivery locker or concierge.
  - Each site-specific development project shall demonstrate that it has provided sufficient loading areas in appropriate locations such that loading activities, including loading vehicle queuing, will not block bicycle or pedestrian facilities, roadway travel lanes, or parking garage access.
- **Other Supporting Facilities.** The following transportation demand management facilities shall be provided:
  - Bicycle Parking and End of Trip Facilities. Ample, convenient, and secure bicycle parking shall be provided on the ground floor or no more than one level below ground floor and shall be adjacent to the primary or secondary entrances to buildings. Bike parking shall include electric outlet access for electric bikes and cargo/extended bikes and shall be designed to accommodate these larger bicycles. Bike repair and wash stations shall be included to enhance the bike parking facilities. Employment land uses shall include lockers and showers.
  - Family TDM Amenities (e.g., storage). Dedicated space for items, such as child car seats, strollers, shared cargo bike(s), and collapsible shopping/utility cart(s) for building residents, shall be provided to facilitate family transportation using carshare, ride hail apps, and active transportation. The family TDM amenity spaces shall be located near pick-up/drop-off, primary or secondary entrances, and/or carshare parking spaces.

4.8.6 SIGNIFICANCE CRITERIA

The following criteria were used to determine the significance of transportation impacts.

Threshold TRA-1: The Baylands Specific Plan would cause a significant impact if:

- **During Baylands construction**
  - **Project construction activities substantially increase vehicle miles traveled.**
- **During post-construction operation of Baylands development**
  - **Per capita VMT for home-based trips by Baylands residents would be greater than 30 percent below existing regional baseline per capita VMT for home-based trips by residents of the nine-County Bay Area region;**
  - **Per employee VMT for home-based trips to work by Baylands employees would be greater than 30 percent below existing regional baseline per employee VMT for home-based trips to work by employees within the nine-County Bay Area region; or**
  - **Baylands development would result in an overall increase in regional (nine-County Bay Area) VMT under cumulative Year 2040 conditions.**

Threshold TRA-2: The Baylands Specific Plan would cause a significant impact if it would inhibit pedestrian or bicycle travel or use of transit.

Threshold TRA-3: The Baylands Specific Plan would cause a significant impact if it would result in hazards to vehicles, bicyclists, or pedestrians.

Threshold TRA-4: The Baylands Specific Plan would cause a significant impact if:

- **An inadequate number of access points were to be provided such that evacuation operations would interfere with emergency response;**
- **Roadway or site design would hinder the ability of emergency service operators to access streets and buildings or to conduct operations within the Specific Plan area.**

4.8.7 PROJECT IMPACTS AND MITIGATION MEASURES

a. Threshold TRA-1: Vehicle Miles Traveled

Methodology for Determining Significance

Most of the Specific Plan's residential development is within a Transit Priority Area, which is defined as "an area within one-half mile of a major transit stop that is existing or planned." CEQA Guidelines Section 15064.3(b)(1) states that "projects within one-half mile of either an existing major transit stop or a stop along an existing high quality transit corridor should be presumed to cause a less than significant transportation impact." Nevertheless, additional VMT analysis has been performed because limiting VMT analysis to those portions of the Baylands that are not within a Transit Priority Area would yield misleading results.

Two separate VMT methodologies are used, including (1) an efficiency-based metric (i.e., VMT per capita), and (2) Total VMT Traveled. For both approaches, OPR's Technical Advisory (OPR 2018) allows reliance upon a comparison to baseline conditions for project level and cumulative analysis. As discussed under OPR's Technical Advisory, "A project that falls below an efficiency-based threshold that is aligned with long-term environmental goals and relevant plans would have no cumulative impact distinct from the project impact. Accordingly, a finding of a less-than-significant project impact would imply a less than significant cumulative impact, and vice versa." Consequently, while the analysis below provides future year cumulative scenarios, these are not required for the purposes of CEQA.

Analysis Scenarios

The transportation effects of the Baylands Specific Plan were evaluated for the following conditions to account for the site's phased buildout (see also **Table 4.8-5**):

1. **Existing Conditions** represents the baseline used to analyze direct and indirect impacts of the Specific Plan project.
2. **Mid-Term Without Project** represents projected background conditions that would exist in 2035. Mid-Term Without Project Conditions were used to evaluate impacts of Phase 1 Baylands development taking into account land use, roadway, and traffic conditions surrounding the Baylands through 2035 when site preparation and construction of the western portion of the Baylands (Phase 1) is projected to be complete.
3. **Mid-Term plus Phase 1** adds buildout of Phase 1 Baylands development (area west of the Caltrain right-of-way) to the projected year 2035 background conditions that were analyzed in the above Mid-Term Without Project scenario.
4. **Mid-Term plus Phase 1 with Recommended Improvements** represents mid-term conditions for the year 2035 consistent with local and regional growth, as well as

buildout of the west side of the Specific Plan area (Phase 1), plus implementation of the year 2035 mid-term improvements recommended in TIA, including the Candlestick interchange improvements (Appendix F.1).

5. **Cumulative without Project** represents cumulative conditions for the year 2040 consistent with the Brisbane General Plan, regional growth associated with Plan Bay Area 2050, and C/CAG's current future year model horizon year of 2040. Existing conditions within the Baylands would continue through 2040 in this analysis scenario. Cumulative without project conditions serve as the basis for analyzing full buildout of the Specific Plan.
6. **Cumulative plus Project** represents cumulative year conditions for the Year 2040 consistent with local and regional growth, including full buildout of the Baylands Specific Plan.
7. **Cumulative plus Project and Candlestick Interchange** represents cumulative year conditions for the Year 2040 consistent with the buildout of the Brisbane General Plan. As shown in **Table 4.8-5**, this scenario includes the Candlestick Interchange as envisioned within the Bi-County Transportation Study and the 2013 Project Study Report.
8. **Cumulative plus Project with Candlestick Interchange and Recommended Improvements** represents cumulative conditions for the year 2040 consistent with the buildout of the Brisbane General Plan and regional growth associated with Plan Bay Area, full buildout of the Specific Plan, improvement of the Candlestick Interchange, and implementation of improvements recommended in the TIA (Appendix F.1).

Table 4.8-5: Baylands Transportation Evaluation Scenarios

	Scenario	Land Uses	Key Infrastructure				
			Geneva Avenue	Sierra Point Parkway	Lagoon Road Alignment	Bayshore Boulevard	Existing or Proposed Candlestick Interchange
1.	**Existing**	2022 conditions	Existing, with terminus at Bayshore Boulevard	Existing[a]	Existing	Existing	Existing
2.	**Mid-Term Without Project**	Reasonably foreseeable land use growth and transportation network changes through 2035	Existing, with terminus at Bayshore Boulevard	Existing[a]	Existing	Existing	Existing + SF's Harney Way Improvements[b]
3.	**Mid-Term + Phase 1**	Reasonably foreseeable land use growth and transportation network changes through 2035 + Baylands Specific Plan Phase 1 buildout (west of Caltrain right-of-way)	Partial Extension: Bayshore to Caltrain tracks, no Geneva bridge over Caltrain	Existing[a]	Existing	Existing	Existing + SF's Harney Way Improvements
4.	**Mid-Term + Phase 1 + Recommended Improvements**	Reasonably foreseeable land use growth and transportation network changes through 2035 + Baylands Specific Plan Phase 1 buildout (west of Caltrain right-of-way)	Extension to Beatty Avenue as Proposed in Specific Plan, including the bridge over the Caltrain rail line[d]	Existing + Extension to Geneva Avenue + Southbound US 101 Roundabout	Realignment to meet US 101 Southbound Ramps + Southbound US 101 Roundabout	Implementation of Bayshore Mobility Plan	Candlestick Interchange per 2013 PSR
5.	**Cumulative Without Project**	Reasonably foreseeable land use growth and transportation network changes through 2040 + Existing Baylands conditions	Existing, with terminus at Bayshore Boulevard	Existing + Northbound US 101 Ramp Signal	Existing	Existing	Existing + SF's Alana Way Improvements

	Scenario	Land Uses	Key Infrastructure				
			Geneva Avenue	Sierra Point Parkway	Lagoon Road Alignment	Bayshore Boulevard	Existing or Proposed Candlestick Interchange
6.	**Cumulative + Project**	Reasonably foreseeable land use growth and transportation network changes through 2040 + Buildout of the Baylands Specific Plan	Extension to Beatty Avenue as Proposed in Specific Plan, including the bridge over the Caltrain rail line[d]	Extension to Geneva Avenue as Proposed in Specific Plan + Northbound US 101 Ramp Signal	Realignment to meet US 101 Southbound Ramps as proposed in the Specific Plan	Existing	Existing + SF's Harney Way Improvements[c]
7.	**Cumulative + Project + Candlestick Interchange**	Reasonably foreseeable land use growth and transportation network changes through 2040 + Buildout of the Baylands Specific Plan	Extension to Beatty Avenue as Proposed in Specific Plan, including the bridge over the Caltrain rail line[d]	Extension to Geneva Avenue as Proposed in Specific Plan + Northbound US 101 Ramp Signal	Realignment to meet US 101 Southbound Ramps as proposed in the Specific Plan	Existing	Candlestick Interchange per the 2013 PSR
8.	**Cumulative + Project + Candlestick Interchange + Recommended Improvements**	Reasonably foreseeable land use growth and transportation network changes through 2040 + Buildout of the Baylands Specific Plan	Extension to Beatty Avenue as Proposed in Specific Plan, including the bridge over the Caltrain rail line[d]	Extension to Geneva Avenue as Proposed in Specific Plan + Northbound US 101 Ramp Signal + Southbound 101 Roundabout	Realignment to meet US 101 Southbound Ramps + Southbound US 101 Roundabout	Implementation of Bayshore Mobility Plan	Candlestick Interchange per the 2013 PSR

SOURCES: Baylands Specific Plan, 2025; Fehr & Peers, 2024.

NOTES: "Existing" refers to the current configuration for each roadway.

a. The City of Brisbane completed a new traffic signal in May 2024 at the US 101 northbound ramp at Sierra Point Parkway after completion of the existing traffic analysis. This measure is considered an existing condition, although it was not included in the existing traffic analysis and was included in all mid-term and cumulative scenarios.

b. San Francisco has near-term plans to create a new signalized intersection at a reconfigured intersection of US 101 northbound ramps, Alana Way, and Harney Way, and an adjacent signal at the intersection of Thomas Mellon Drive and Harney Way. These plans are required as a part of the land use growth included in the mid-term without project conditions, including Executive Park and Candlestick-Hunters Point. San Francisco's latest plans are presented as a part of the Harney-101 Transit Crossing project: https://www.sfmta.com/projects/harney-101-transit-crossing-project.

c. The proposed extension of Geneva Avenue to the existing intersection of US 101 southbound ramps, Beatty Avenue, and Alana Way would, at a minimum, require this intersection to be signalized to accommodate the new intersection leg to accommodate the four mixed flow lanes and two bus rapid transit lanes on the Geneva Avenue extension. The Project does not propose any other changes to the geometry of the other legs of the intersection. Therefore, due to the lack of a second northbound receiving lane on Alana Way to accommodate two lanes of traffic from Geneva Avenue, the northbound approach of the Geneva Avenue extension was assumed to include one northbound through and one northbound right turn lane.

d. The Specific Plan does not show the connection between the Geneva Avenue extension and the new Candlestick Interchange, as identified in **Table 4.8-13** in the Consistency with Local and Regional Plans for Transit, Bicycle, and Pedestrian Travel Modes section. To analyze this scenario, Fehr & Peers assumed that the configuration of the Geneva Avenue extension east of Sierra Point Parkway matches the roadway configuration shown in the 2013 PSR.

Travel Demand Forecasting

The Transportation Impact Analysis prepared by Fehr & Peers, which can be found in Draft EIR Appendix F.1, contains a detailed assessment of the differences between available travel models and the models used to analyze Baylands transportation impacts. The travel demand forecasting approach used for the Baylands relies on two models: the C/CAG-VTA Bi-County Transportation Model[161] (C/CAG Model) and Brisbane's sub-area travel model.

The C/CAG model was reviewed and updated through a series of diagnostic tests to assess the model's performance and reasonableness, and a series of refinements were made to the model inputs for land use, roadway network, and transit service within Brisbane and adjacent communities. Appendix F.1 (Appendix B included therein) includes the memorandum Travel Demand Model Review and Selection that presents how these updates improve the C/CAG Model's effectiveness in reasonably estimating current travel patterns and changes in travel patterns in response to land use and transportation network changes. The publicly available information that C/CAG provides for the Travel Demand Model can be found at: https://ccag.ca.gov/programs/travel-demand-model/.

Brisbane's sub-area model, developed with the PTV Visum software platform for this study, reflects origin-destination patterns consistent with the C/CAG Model and incorporates refinements to the level of detail in the local street network. The platform includes a combination of inputs from the macroscopic C/CAG regional model, the project travel demand outputs, and aspects of a detailed traffic micro-simulation model. This model accounts for more detailed factors than the C/CAG model, including roadway capacity, signal timing, traffic congestion, and local circulation networks, which allows for the assignment of traffic to local roadways and improved validation of traffic volumes on roadway segments and travel times compared to the regional C/CAG model. The sub-area roadway network includes most public streets and major driveways in the study area.

combination of the C/CAG and Brisbane Subarea models. Each of the scenarios identified in **Table 4.8-5** were coded into the C/CAG model and Brisbane's sub-area model.

The future year C/CAG 2040 model was reviewed to confirm that Specific Plan development was included. This model run represents the Scenario 6 – Cumulative Plus Project and Candlestick Interchange. Therefore, development of the cumulative plus project scenario (Scenario 5) included replacing the future Candlestick Interchange with the existing interchange in the C/CAG Model. The without project scenarios included the removal of the proposed Baylands development, and the reallocation of these land uses elsewhere in the region to maintain consistency with Plan Bay Area future year land use projections in the C/CAG Model. The region used to reallocate growth included San Francisco and San Mateo Counties to

[161] The publicly available information that C/CAG provides for the Travel Demand Model can be found at: https://ccag.ca.gov/programs/travel-demand-model/

represent the Baylands' role in meeting demand for housing and employment-generating uses in surrounding communities, while not changing the total amount of regional growth expected for 2040. Mid-term scenarios were coded with the Baylands land uses and infrastructure network, and other background model changes were made to reflect the 2035 conditions.

The C/CAG model was used to develop the trip generation and trip distribution patterns for the Baylands Subarea Model, except for the Baylands itself. C/CAG's trip distribution patterns for the project site were applied to the project trip generation results in the Baylands Subarea Model to assign project-generated vehicle trips to the study roadway network for all plus project scenarios.

Baylands Trip Generation

The methodology for determining trip generation from Baylands residential and commercial uses is presented below followed by a description of the allocation of land uses between different mixed-use zones.

Residential

Baylands residential trip generation rates were analyzed per dwelling unit for attached single family (ITE land use code 215) and low-, medium-, and high-rise multifamily housing (ITE land use code 220 through 222).

Commercial

The number of employees was used to estimate the trip generation for the office, biotech campus, and low-density commercial uses, and the solar farm and utility scale battery land uses to account for the fact that traditional office space has more employees per square foot than biotech or other low-density commercial uses that include labs and other research facilities. This approach accounts for the most likely types of employment within the Specific Plan. Employee trip generation rates for ITE land use code 710 General Office was used since this category has the largest dataset for employment-based land uses and represents the trip-generating characteristics for the broadest range of potential employment land uses.

The project proposes ground floor retail within various planning districts, including Caltrain station-centered retail and a "shopping street" concept in the Icehouse District. To reflect the combination of local-serving and regional retail, trip generation was calculated using ITE Land Use 820, for retail centers between 50,000 and 150,000 square feet since the Specific Plan as analyzed includes a total of 102,200 square feet of retail. Retail trip generation was calculated for the Specific Plan as a whole and allocated among districts based on the proportion of total retail square footage. Trip generation estimates for the Baylands hotel component are based on the anticipated number of hotel rooms.

Baylands Net Vehicular Trip Generation

The geographic setting of the Baylands and its mix of land uses, neighborhood demographics, design of the pedestrian and bicycling environment, and proximity to regional transit reduce the amount of vehicle trips generated by Baylands land uses to locations outside of the Baylands by 25 to 30 percent compared to similar isolated, stand-alone land uses included in the ITE Trip Generation Manual. Vehicle trips would be approximately 40 percent lower than similar isolated, stand-alone land uses studied in the ITE Trip Generation Manual.

Table 4.8-6 presents the number of vehicle trips that would be generated by Baylands development on a daily basis. As presented in **Table 4.8-7**, office development generates by far the largest amount of vehicle trips. The Baylands Traffic Impact Analysis (Appendix F.1 and its appendices) details traffic generation by traffic analysis zone and land use.

Table 4.8-6: Baylands Traffic Generation

	Daily
Phase 1: Bayshore, Roundhouse, and Icehouse Hill Districts (west of Caltrain Right-of-Way)	
Total Trips (Unadjusted)	58,886
Internalized and Non-Auto Trips	-15,421
Subtotal	*43,465*
TDM Reduction (16.4%)	-7,128
Total Phase 1 Vehicle Trips	**36,337**
Phase 2: Campus East District (east of Caltrain Right-of-Way)	
Total Trips (Unadjusted)	15,515
Internalized and Non-Auto Trips	-3,833
Subtotal	*11,682*
TDM Reductions (16.4% reduction)	-1,916
Total Phase 2 Vehicle Trips	**9,766**
Baylands Specific Plan Buildout	
Total Trips (Unadjusted)	74,401
Internalized and Non-Auto Trips	-19,254
Subtotal	*55,147*
TDM Reductions (16.4% reduction)	-9,044
Total Baylands Vehicle Trips	**46,103**

SOURCE: Fehr & Peers, 2024

Table 4.8-7: Baylands Trip Generation by Land Use at Buildout

Trip Type	Daily
Total Vehicle Trips	**46,103**
Residential Vehicle Trips	8,634
Percent of Total Vehicle Trips	19%
Office Vehicle Trips	26,608
Percent of Total Vehicle Trips	58%
Retail Vehicle Trips	5,749
Percent of Total Vehicle Trips	12%
Hotel Vehicle Trips	5,111
Percent of Total Vehicle Trips	11%

SOURCE: Fehr & Peers, 2024

Baylands Traffic Zones

While most mixed-use projects are of a size that their external traffic distribution can be analyzed as a single unit, the size and complexity of the Baylands development necessitated use of multiple traffic zones. The Traffic Impact Analysis allocated Baylands land uses to seven traffic analysis zones (see **Figure 4.8-7**) for the following reasons:

- The total amount of office space proposed by the Specific Plan exceeds the size of any of the sample sites used to develop the ITE trip generation rates. Therefore, the size of the office space within each zone allows for greater consistency with the underlying trip generation data and helps prevent potential outlier effects due to the development's size.
- Land uses in the districts to the west of the Caltrain right-of-way would benefit from the mix of land uses within adjacent land uses. For example, residents of the Roundhouse District would be within walking distance of the office space and retail services in the Icehouse Hill District; therefore, this interaction should be reflected in the trip generation.
- The Baylands is large enough that some areas would operate semi-autonomously.
- Land uses west of the Caltrain right-of-way would benefit from the mix of land uses within adjacent land uses. For example, residents of the Roundhouse District would be within walking distance of the office space and retail services in the Icehouse Hill District; therefore, this interaction should be reflected in the trip generation.

Land uses were allocated between trip generation zones based on the number of dwelling units and commercial square footage. This approach accounts for the flexibility of the Specific Plan, which allows different build outs of localized areas within the overall maximum development envelope established through the maximum allowable density per block and per District shown in Chapter 3 of the Baylands Specific Plan. The land uses for each traffic analysis zone used in the analysis are presented in **Table 4.8-8**.

Figure 4.8-7: Baylands Traffic Analysis Zones

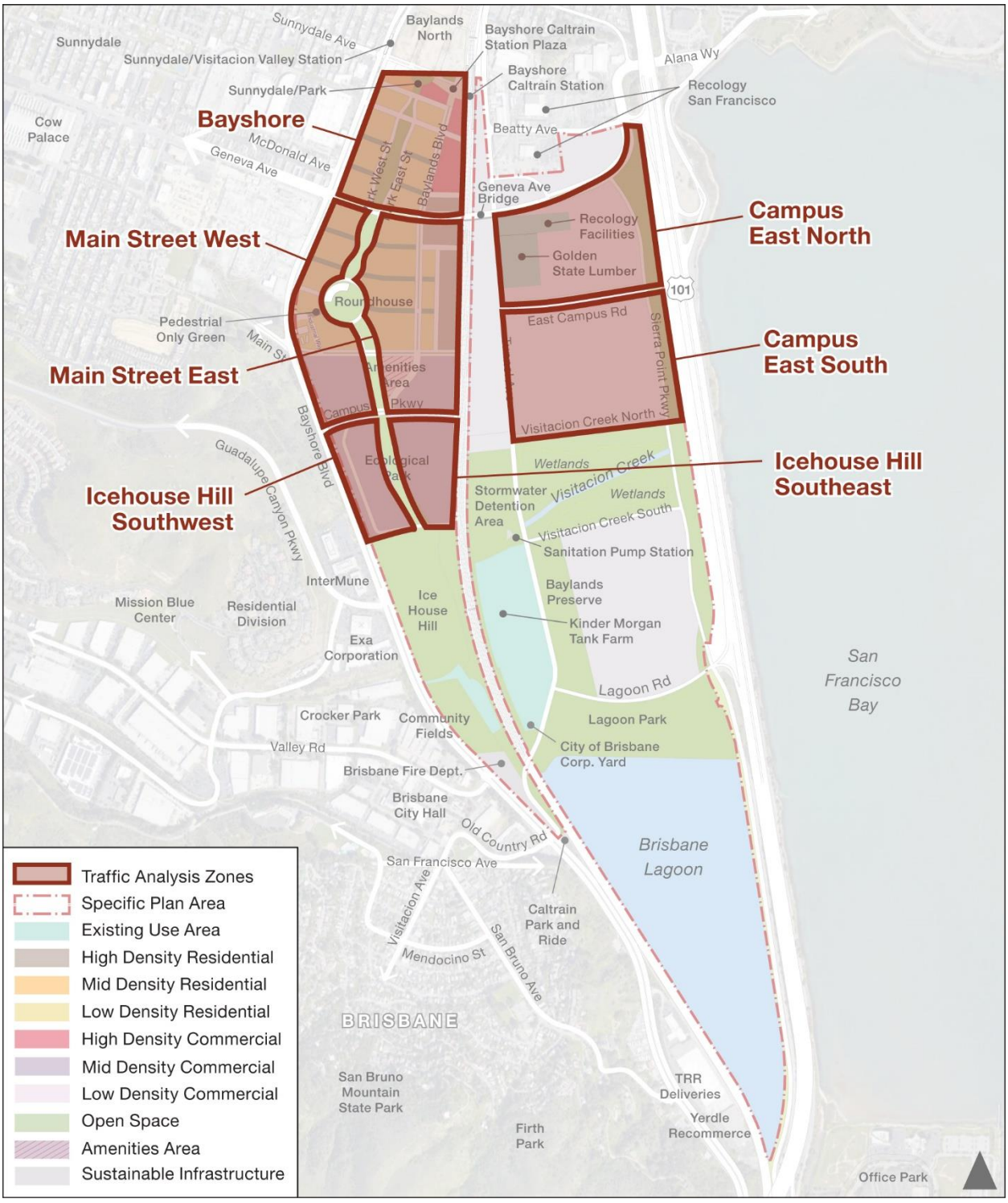


Table 4.8-8: Land Use by Traffic Analysis Zone

ITE Code	Land Use Category	Units	Phase 1 – Year 2035 Mid-Term					Phase 2 – Year 2040 Long-Term		BUILDOUT
			Bayshore	Main Street West	Main Street East	Icehouse Hill Southeast	Icehouse Hill Southwest	Campus East North	Campus East South	TOTAL
Residential Development Types										
215	Attached Single Family	Dwelling Units	426	273	460	0	0	0	0	**1,159**
220	Multifamily Housing Low Rise	Dwelling Units	95	0	0	0	0	0	0	**95**
221	Multifamily Housing Mid Rise	Dwelling Units	102	0	245	0	0	0	0	**347**
222	Multifamily Housing High Rise	Dwelling Units	110	0	489	0	0	0	0	**599**
TOTAL										**2,200**
Non-Residential Development Types										
710	General Office[a]	Employees (1,000 sf)	1,694 (525)	2,049 (717)	1,869 (654)	3,087 (1,070)	2,662 (931.8)	3,203 (1,121)	3,940 (1,379)	**19,509 (6,397.8)**
820	Retail[b]	1,000 sf	52	8	26.2	8	8	0	0	**102.2**
310	Hotel[c]	Rooms	800	0	0	0	0	0	0	**800**

SOURCES: Baylands Specific Plan; Fehr & Peers, 2024.
NOTES:

a. The office, biotech campus, and low-density commercial uses, and the solar farm and utility scale battery land uses are analyzed based on the number of employees using the ITE land use code 710 General Office to account for the trip-generating characteristics of employees for the broadest range of potential land uses, including trips associated with parking.
b. The specific square footage and location for retail land use is based on the Specific Plan's intent to provide convenient retail services and was allocated to each zone based on whether ground floor retail was permitted in a given block, and using the retail square footage presented in the Fiscal Impact Analysis of the Baylands Specific Plan (EPS, January 5, 2022). As noted in the Project Description, this may include cafés or other active uses within the public facilities and open space components of the Specific Plan. These uses are consistent with ITE use 820 (Shopping Center).
c. The number of hotel rooms is based on estimates provided in Fiscal Impact Analysis of the Baylands Specific Plan by EPS (January 2022).

Mode Split

The number of trips generated by Baylands development that would remain internal within the Specific Plan area and/or occur by walking, bicycling, or transit were estimated using a combination of the EPA's MXD methodology for the Specific Plan's design features and the CAPCOA Handbook for the TDM measures required per the City's TDM Ordinance that are not captured within the MXD methodology.[162] The result of the MXD methodology is an estimate of external vehicle trips from the Baylands, accounting for the Specific Plan's geographic setting, mix of site and nearby land uses, area demographics, design of the pedestrian and bicycling environment, proximity to regional transit, and TDM measures.

Details regarding the MXD methodology and assessment of TDM plan effectiveness can be found in Appendix C to Appendix F.1, *Transportation Impact Assessment*. See also:

https://www.fehrandpeers.com/blog/mxd/

TDM Assessment

Table 4.8-9 presents the results of an evaluation of the required TDM measures for consistency with the Brisbane Municipal Code 10.52 using the CAPCOA Handbook. This assessment indicates that the TDM measures would reduce vehicle trip generation by an additional 16.4 percent beyond the estimates from the MXD methodology. As presented in Appendix F.1, design features that are incorporated within the MXD methodology are not included in the assessment of the TDM plan effectiveness to avoid double counting of vehicle trip reductions. The 2025 Specific Plan proposes TDM measures in addition to those listed in **Table 4.8-9** that are not included in the CAPCOA Handbook given the limited research supporting a quantifiable reduction. Quantitative reductions for these measures have not been taken in this analysis for those additional measures.

Further reductions to single-occupancy vehicle travel may be achieved with the planned transit facilities that would serve the Specific Plan area, such as the BRT service proposed in the Bi-County Study and additional Caltrain service as envisioned by the Caltrain Business Plan. However, quantitative credit for these reductions has not been included in this analysis. The required TDM program would support use of these modes through measures such as the transit incentives and parking management strategies.

[162] For more information on the MXD+ methodology please visit https://www.fehrandpeers.com/mainstreet/.

Table 4.8-9: Transportation Demand Management Effectiveness

Features	Measures	Effectiveness
Land Use	• Affordable housing	1.1%
Transit	• Shuttle program • Transit incentives such as marketing or transit pass subsidies	6.3%
Active Transportation	• Low-stress pedestrian and bicycle facilities • Bicycle parking	2.2%
Parking & TDM	• Parking management strategies such as unbundled and priced parking • Other TDM strategies required by the City of Brisbane or C/CAG	7.9%
Total Vehicle Trip Reduction from TDM Measures Required by Brisbane Municipal Code Chapter 10.52		**16.4%[a]**

SOURCE: Fehr & Peers, 2024.
NOTE:
a. Per the CAPCOA 2021 Handbook, the total TDM effectiveness is calculated by multiplying the effectiveness as follows to account for multiplicative dampening: 1-[(1-0.011) X (1-0.063) X (1-0.022) X (1-0.079)] = 0.164.

Vehicle Miles Traveled Analysis

Use of the C/CAG model for VMT purposes allows for accurate comparisons of the project's per capita VMT to the region as a whole and also allows for an assessment of how the project would affect regional VMT (i.e., displacement of existing trips), taking into account general shifts in land use patterns and travel demand.[163]

The C/CAG model provides for the evaluation of the following types of VMT:

- **Home-based VMT** includes trips made by Baylands residents that begin or end at home.
- **Home-based work VMT** includes trips made by employees within the Baylands that travel directly between home and work (such as a commute trip).
- **Total VMT** includes all trips within a selected geographic area, including those that are neither home-based nor work-based. Total VMT can be either based on project-generated VMT (VMT to and from the site or study area, including trips to or from outside the study area) or boundary VMT (all vehicle miles within the study area, including trips that are just passing through).
    - ***Project-generated VMT*** would address all trips to and from a specific project site such as the Baylands.
    - ***Boundary VMT*** would include all trips within a specific geographic area, such as trips within the Baylands (including trips passing through the site on roadways

[163] The MXD methodology for trip generation allows for disaggregating trips by land use, while using the C/CAG model for VMT allows for an accurate comparison with regional VMT rates. For more information on the MXD+ methodology, please visit https://www.fehrandpeers.com/blog/mxd/ or see *Getting Trip Generation Right Eliminating the Bias Against Mixed Use Development* by the American Planning Association, May 2013.

such as Geneva Avenue extension), the City of Brisbane, San Mateo County, or the nine-county Bay Area region.

Home-based VMT and home-based work VMT per employee were determined to be the appropriate VMT metrics to reflect Baylands residential and employment uses. Home-based VMT reflects how close a residence is to jobs, shopping, and other amenities. Home-based work VMT per employee reflects how close a workplace is to employee residences. The home-based work VMT per employee is specific to work trips, which helps it compare office or other employment projects across different locations.

This analysis also includes an evaluation of the full buildout of the project on total regional VMT within the nine-county Bay Area region. This VMT methodology is proposed by OPR and accounts for the effects of the proposed retail components of the Project and the combined effects of the proposed land use and transportation facilities that would support future residents and employees at the project site. This includes the effect of land uses within the Project site that could be presumed to be less than significant due to their locally serving nature based on OPR's guidance, such as affordable housing, retail, hotels, or other community-serving amenities and public facilities, such as schools, libraries, parks, fire stations, and sustainable infrastructure. While OPR does not specify an approval for all of these land use types, for both retail and transportation facilities, OPR recommends the use of a total VMT metric to evaluate whether the project would increase total VMT.

Determination of Significance

Brisbane has not adopted VMT policies, thresholds, or screening criteria. However, the Final 2022 CARB Scoping Plan (CARB 2022) indicates that to meet state-wide greenhouse gas reduction goals, state-wide VMT must decrease by 30 percent per capita by 2045. This is more conservative than the SB 743 technical guidance provided by OPR in December 2018, which recommended "per capita or per employee VMT that is 15 percent below existing development." The CARB Scoping Plan does not establish reduction goals for individual land uses in a manner comparable to the OPR Technical Advisory. Therefore, 30 percent below the regional per capita average VMT threshold has conservatively been used.

Table 4.8-10 presents VMT per capita that represents 30 percent below the regional average based on the C/CAG model.

Table 4.8-10: Vehicle Miles Traveled per Capita Threshold

Land Use	Bay Area Regional Average	30% Below the Regional Average
Residential	12.8	9.0
Employment	15.0	10.5

SOURCES: C/CAG Travel Demand Model; Fehr & Peers, 2024.

Impact Assessment

Construction

Construction-Related Travel

Baylands construction activities[164] would generate temporary and intermittent construction-related vehicle miles traveled from the following sources:

- **Movement of Soil from the Eastern to the Western Portion of the Baylands during Site Grading.** Grading of the Baylands would generate the most intensive truck traffic during construction, with trucks hauling soil materials from the east side of the Baylands to the west side following a 3.8-mile route using a combination of off-road haul routes and public streets indicated in **Figure 3-54**. The movement of these soils is anticipated to generate as much as 1.74 million truck vehicle miles over a two-year, ten-month period.[165]
- **Construction Worker Traffic.** Construction workers would be employed from the local labor pool and would be using the regional transportation network regardless of Baylands development for work at other construction sites. Therefore, construction worker travel would not change regional VMT.
- **Delivery of Construction Materials and Equipment; Disposal of Construction Debris.** Delivery of construction materials and equipment, as well as hauling of construction debris, would occur over the Specific Plan's 20-year construction period. Such delivery and hauling activities would use the regional transportation network regardless of Baylands development. Due to the Specific Plan's location adjacent to San Francisco and the US 101 freeway, regional VMT would not be increased compared to being constructed elsewhere in the region.

Disruption of Roadways[166]

Baylands construction activities could temporarily increase vehicle miles traveled by disrupting roadways to an extent that such activities would induce motorists to detour to longer routes around construction areas to avoid lane closures, narrowing of lanes, blockage of travel lanes by construction traffic entering or existing construction sites, and similar conditions. As noted

[164] Baylands construction activities would include on-site demolition, grading, infrastructure installation, and building construction activities within the Baylands; construction activities associated with off-site improvements, such as those associated with the Bayshore Mobility Plan, trenching, installation of potable and recycled water lines, and off-site electrical utility lines and Martin Substation improvements; and relocation of Fire Station No. 81.

[165] Vehicle miles traveled (VMT) by heavy duty trucks, such as those that would be used for soil hauling, are not analyzed in addressing VMT impacts. Air pollutant and GHG emissions from heavy duty trucks are, however, included in calculations of project-related air quality and GHG impacts.

[166] Construction impacts related to pedestrian and bicycle movement, as well as access to transit is analyzed in relation to Threshold TRA-2.

above, City requirements establish procedures and monitoring requirements to ensure construction activities cause the least possible interference with people walking, biking, driving, and riding transit, such as through detour routes, temporary signage, protection for other roadway users, and review by the City of Brisbane City Engineer to ensure compliance with relevant regulations.

Construction of the Specific Plan and related off-site infrastructure would require trenching work within roadway rights-of-way for installation of potable water, recycled water, wastewater, electric, and telecommunication lines. Construction activities will also require temporary use of the public roadway rights-of-way for the staging of construction materials and equipment within sidewalks, parking lanes, travel lanes, or adjacent parkways. Construction-related vehicles traveling to and from construction work areas would share travel lanes with other vehicles. In general, Baylands construction activities can result in obstructions or temporary changes to the public right-of-way, requiring temporary lane closures and detours or temporary narrowing of lanes, including:

- **Site grading.** Project grading plans (**Figure 3-52** and **Figure 3-53**) indicate that Beatty Avenue and Tunnel Avenue would be unaffected by site grading and would therefore remain open at all times through grading and construction activities. Temporary lane closures would occur along Tunnel Avenue.
- **Realignment of Lagoon Road.** The Specific Plan proposes realigning Lagoon Road to protect the roadway from sea level rise and to connect directly to the existing southbound US 101 off- and on-ramps. It is the City's preference that Lagoon Road terminate at the southbound US 101 off- and on-ramps in a roundabout if approved by Caltrans. Potential disruptions to traffic along the existing Lagoon Road could occur at the westernmost point of the realigned road section and at the current southbound US 101 off- and on-ramps. Disruptions could also occur at the southbound US 101 off- and on-ramps during roundabout construction.
- **Connection of the Geneva Avenue extension to Beatty Avenue.** Temporary lane closures or narrowing at the existing Beatty Avenue-Alana Way intersection could occur when construction of the Geneva Avenue extension connects Geneva Avenue to that existing intersection. Construction activities at this intersection would consist of adding a fourth leg to the existing three-way intersection, allowing traffic flow at the Beatty Avenue-Alana Way intersection to be maintained in a safe manner throughout Baylands grading and construction.
- **Improvements to Tunnel Avenue, including widening and extending the Golden State Lumber rail spur across Tunnel Avenue.** Mitigation Measure TRA-3i requires that Tunnel Avenue be improved to provide a three-lane road section with a continuous left turn so that it safely accommodates projected future traffic volumes. Improvements

along Tunnel Avenue could reduce accessibility to the Caltrain Bayshore station and discourage the use of transit until construction is completed.

While Baylands development would not directly displace Golden State Lumber's main facility on the east side of Tunnel Avenue, it would displace the area leased by Golden State Lumber for loading, unloading, and temporary storage of lumber shipped by rail along the west side of Tunnel Avenue. However, there are reasonably foreseeable options if Golden State Lumber elects to continue rail delivery, including extending the existing siding used by Golden State Lumber across Tunnel Avenue to provide a new location for the rail off-loading immediately south of Golden State Lumber's existing main Tunnel Avenue facility.

- **Construction of Bayshore Mobility Plan and Safe Routes to School improvements.**[167] Construction of Mobility Plan improvements would occur within existing roadway rights-of-way or immediately adjacent to rights-of-way in areas devoid of sensitive biological habitats. Construction of Bayshore Mobility Plan improvements would cause temporary lane closures or narrowing at Bayshore Boulevard's intersections at Geneva Avenue and at Main Street.
- **Construction of off-site potable water lines.**
    - ***Bayshore Boulevard and Guadalupe Canyon Parkway.*** As discussed in Draft EIR Section 4.16, modeling of the City's water system indicates the need for installing new water lines within Bayshore Boulevard and Guadalupe Canyon Parkway. Since water lines are typically constructed beneath the roadway, temporary lane closures or narrowing would occur as trenches are opened, leaving temporary metal plates covering trenches until construction is complete.
- **Construction of off-site recycled water lines.**
    - ***Bayshore Boulevard, Airport Boulevard, and streets within the Sierra Point and Oyster Point portions of the City of South San Francisco.*** Recycled water lines are typically constructed underneath the roadway. Since water lines are typically constructed beneath the roadway, temporary lane closures or narrowing would occur as trenches are opened, leaving temporary metal plates covering trenches until construction is complete.
- **Construction of off-site electrical utility lines.**
    - ***Geneva Avenue and Bayshore Boulevard.*** As illustrated in **Figure 3-49**, an underground utility line will be constructed across Bayshore Boulevard and

[167] Public Resources Code Section 21080.25(b)(1) exempts "Pedestrian and bicycle facilities that improve safety, access, or mobility, including new facilities, within the public right-of-way" from CEQA. The Bayshore Mobility Plan meets the relevant criteria set forth in Public Resources Code Section 21080.25(c), such as being located in an urbanized area in an existing public right-of-way. The plan would not demolish affordable housing units or increase automobile capacity.

along Geneva Avenue to the Martin Substation. Construction of the utility line across Bayshore Boulevard would cause temporary lane closures or narrowing would occur as trenches are opened, leaving temporary metal plates covering trenches until construction is complete.

- **Construction of on-site Buildings.**
    - As buildings are constructed throughout the Baylands, temporary partial lane closures would be required for connections of utilities.
- **Construction of on-site Telecommunications Facilities.**
    - ***Bayshore Boulevard and Tunnel Avenue.*** Although reliance on telephone "land lines" is decreasing rapidly, the need for physical telecommunications facilities to support internet and cell phone service is increasing. Thus, installation of telephone and internet cabling and small wireless facilities within roadway rights-of-way will occur.[168]

Construction Staging

Given the size of the Specific Plan area and extent of off-site improvements, most construction staging for on-site work, including connecting the realigned Lagoon Road to the US 101 southbound on- and off-ramps with a roundabout, would be able to occur within off-street Baylands locations to avoid obstructing roadways, although staging may occasionally need to occur on the adjacent sidewalks, within parking lanes, and/or parkways adjacent to sidewalks. Staging for construction of recycled water lines in South San Francisco would likely occur within or immediately adjacent to the outside northbound travel lane of Airport Boulevard, causing temporary narrowing or closures of that lane.

Depending on the design and access of these staging areas, queueing of trucks waiting to load or unload soil or deliver construction materials or equipment could back up onto adjacent public roadways. Such on-street truck queueing could cause motorists to divert onto longer routes to avoid the truck queue. Thus, Baylands activities would require re-routing of normal traffic operations to substantially longer routes due to road closures.

Operations

VMT per capita is represented as the home-based VMT per resident and the home-based work VMT per employee. Baylands development would generate lower VMT per capita under long-term buildout conditions compared to mid-term Phase 1 conditions, reflecting that as the local area and region densify, residents and employees would, on average, travel shorter distances

[168] Small wireless facilities are defined in 47 C.F.R Section 1.6002(l) and are mounted on structures or poles less than 50 feet in height. Their construction within public rights-of-way is typically exempt from local regulation or CEQA.

for daily activities thereby generating less VMT. As shown in **Table 4.8-11**, the Specific Plan's location in relation to transit, mix of land uses, and TDM programs result in substantially lower per capita VMT than the regional average.

Table 4.8-11: Baylands per Capita Daily Vehicle Miles Traveled

Land Use	Existing Bay Area Regional Average	Mid-Term 2035 (Phase 1)		Cumulative Plus Project Buildout 2040 No Candlestick Interchange		Cumulative Plus Project Buildout 2040 With Candlestick Interchange	
		Per Capita	Below Regional	Per Capita	Below Regional	Per Capita	% Below Regional
C/CAG Model Results							
Residential	**12.8**	**9.8**	-23.4%	**9.6**	-25.0%	**9.5**	-25.8%
Employment	**15.0**	**11.2**	-25.3%	**11.0**	-26.7%	**11.0**	-26.7%
Baylands VMT with Implementation of Required TDM Measures[a]							
Residential	**12.8**	**8.2**	-35.9%	**8.0**	-37.5%	7.9	-38.3%
Employment	**15.0**	**9.4**	-37.3%	**9.2**	-38.7%	9.2	-38.7%

SOURCE: C/CAG Travel Demand Model; Fehr & Peers, 2024.

NOTE:

a. While the C/CAG model accounts for the land use factors, such as Specific Plan density, diversity of land uses, and distance to transit that are accounted for in the MXD methodology, it does not account for the TDM measures. Therefore, the effect of the required TDM measures (16.4 percent reduction in VMT) is presented separately.

The lower per capita VMT that would be generated by Baylands residents and workers was analyzed on a regional basis, comparing regional VMT with Baylands development to regional VMT without the Specific Plan assuming that the Specific Plan's proposed residential and commercial development would be spread between San Francisco and San Mateo County. Cumulative with and without project scenarios therefore maintain the same total regional land use growth consistent with Plan Bay Area, located in the two counties adjacent to the Baylands. As indicated in **Table 4.8-12**, developing the Baylands Specific Plan would reduce daily regional VMT by 80,000 miles daily at buildout (105,000 miles with construction of Candlestick interchange improvements).

Table 4.8-12: Effect of Baylands Development on Daily Regional Vehicle Miles Traveled

	Regional Vehicle Miles Traveled Nine-County Bay Area Region	Decrease Due to Baylands Development
Cumulative 2040 VMT Without Baylands	197,771,000	
Cumulative 2040 VMT With Baylands		
No Candlestick Interchange	197,691,000	80,000
With Candlestick Interchange	197,666,000	105,000

SOURCE: C/CAG Travel Demand Model; Fehr & Peers, 2024.

NOTE: VMT results from C/CAG Travel Demand Model are presented in this table because the effect of the required TDM measures would further reduce VMT generated by the region but would be imperceptible for the results presented in this table at the scale of the nine-county Bay Area region.

Bayshore Mobility Plan

The Bayshore Mobility Plan would implement the requirements of General Plan Amendment GP-1-19. Provision of such features, such as the reduction of vehicle through lanes and addition of pedestrian and bicycle facilities while maintaining transit, would not lead to a substantial or measurable increase in VMT according to OPR's *Technical Advisory on Evaluating Transportation Impacts in CEQA*.[169] As discussed in that Advisory, "reduction in the number of through lanes" and "[a]ddition of new or enhanced bike or pedestrian facilities on existing streets/highways or within existing public rights-of-way" are "not likely to lead to a substantial or measurable increase in vehicle travel." Further, the Bayshore Mobility Plan would also include signal preemption, bus and emergency vehicle queue jumps, median breaks, and a shared use path that can accommodate emergency vehicles for short distances to bypass queues. Therefore, the Bayshore Mobility Plan would not increase VMT. Implementation of the Bayshore Mobility Plan would improve citywide mobility in a manner consistent with local and regional policies and reduce the potential for hazardous conditions along Bayshore Boulevard by providing adequate access control and complete street facilities to support multi-modal travel.

Displaced Tenants

There is an adequate existing inventory of vacant building area to accommodate the approximately 231,400 square feet of existing industrial uses within the Specific Plan area that would be displaced by Baylands development. As of November 2022, over 6.3 million s.f. of industrial building area was vacant within San Francisco and San Mateo counties, over 2.6 million s.f. of which was located within Brisbane and adjacent communities. The 231,400 square feet of industrial uses that would be displaced from the Baylands represents 8.9 percent of the vacant industrial space within Brisbane and adjacent communities and 3.7 percent vacant industrial space within San Francisco and San Mateo counties.

The 231,400 square feet of existing industrial uses displaced from the Specific Plan would be most likely to relocate into the more than 6.3 million s.f. of existing vacant industrial building area within San Francisco and San Mateo counties, over 2.6 million s.f. of which is located within Brisbane and adjacent communities. However, there is a lack of specific and reliable information as to the precise distribution of sites to which these industrial uses would actually relocate, rendering any assumptions as to relocation sites speculative. Surveys of existing tenants were not used because:

- The results of tenant surveys would not be reliable or static since tenants and their employees change over time;

[169] Technical Advisory on Evaluating Transportation Impacts in CEQA, http://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf.

- Responses to such surveys would not be binding, would not be capable of being confirmed, and could change before lease termination and the start of construction if the Specific Plan is approved; and
- The site to which any given business would relocate depends upon the specific availability of space and economic conditions at the time an actual decision to relocate is being made. Because these factors shift over time, responses provided in a survey may reflect substantially different space availability and economic conditions than would exist as much as several years later when an actual relocation decision would need to be made.

Significance Conclusion for Impact TRA-1

Construction

Construction within Brisbane roadway rights-of-way would be required to comply with Brisbane Municipal Code Chapter 12.04, the City's standard encroachment requirements, and Traffic Control Plans to be prepared as part of encroachment permit applications.[170] In addition, construction activities affecting state facilities, such as the US 101 interchanges at Alana Way and Beatty and Sierra Point Boulevard, are subject to Caltrans encroachment permits.

As a result, construction-related activities within City of Brisbane rights-of-way would typically occur Monday through Friday, between 8:00 a.m. and 5:00 p.m. Any construction activity occurring within Brisbane public rights-of-way outside of these hours or on weekends would require specific written authorization from the City. Further, work within the Bayshore Boulevard, Guadalupe Canyon Parkway, Valley Drive, Tunnel Avenue, Lagoon Way, and Sierra Point Parkway rights-of-way would be further restricted before 9:00 a.m. or after 4:00 p.m.[171] Construction activities would maintain two-way traffic on all two-way streets at all times; however, flaggers with radios would be positioned at each end of a one-lane construction detour, if needed at times, to maintain two-way traffic. In addition, all traffic control, warning, and guidance devices would be required to conform to the California Manual on Uniform Traffic Control Devices (CA MUTCD).[172] Brisbane Municipal Code Section 12.04.070 notes that temporary roadways, driveways, and walks for vehicles and pedestrians are to be constructed where required. Temporary travel lane closures would be reviewed by the City Engineer and by the fire and Police Departments to ensure that emergency vehicle access is not impeded.

Construction of off-site recycled water lines within the City of South San Francisco would be subject to issuance of an encroachment permit from the South San Francisco Public Works

[170] Brisbane's requirements for encroachment permits are described in Section 4.8.2 b.

[171] For additional details see the application at https://www.brisbaneca.org/publicworks/page/public-works-permits.

[172] California Department of Transportation, *California Manual on Uniform Traffic Control Device*s, 2014 Edition, Revision 8 (January 2024), accessed March 28, 2025, https://dot.ca.gov/programs/safety-programs/camutcd.

Department and be subject to the standard requirements of that permit,[173] which requires that work may only be performed and traffic controls may only be deployed between the hours of 9:00 a.m. and 3:00 p.m., Monday through Friday, unless otherwise restricted or allowed by City staff. Any open trenches within South San Francisco rights-of-way would be required to be satisfactorily covered at all times when work is not active in the vicinity. Trenches would not be permitted to be left open at the end of a workday unless steel plated in accordance with the Public Works Department's standards. Traffic controls within South San Francisco would be required to conform to the CA MUTCD and Caltrans Standard Plans. Where sidewalks exist, safe passage is to be maintained at all times through the work area. At locations where the entire sidewalk width must be closed for construction, an alternative route diverting pedestrians into the road and adjacent to the closed sidewalk protected by k-rail or other approved barricades and identified by warning signs, lights, and other safety devices conforming to the requirements of the CA MUTCD is required.

All projects and activities on the State highway right-of-way must secure an encroachment permit from Caltrans and comply with applicable laws, regulations, policies, standards, and requirements. Caltrans requirements for encroachment permits within State rights-of way can be found at:

https://dot.ca.gov/programs/traffic-operations/ep.

Construction activities within public rights-of-way would be temporary and subject to Brisbane's, South San Francisco's, Daly City's, and Caltrans' encroachment permit requirements within their respective rights-of-way, including standard encroachment requirements and Traffic Control Plans to be prepared. Consequently, work in public rights-of-way would not cause roadway disruptions to a degree that would substantially increase vehicle miles travelled. VMT construction impacts would, therefore, be less than significant.

Operations

As discussed above, most of the Baylands residential development is contained within a Transit Priority Area. In addition, Per capita VMT by Baylands residents and employees would be more than 30 percent below the existing regional baseline VMT for both Baylands residents and employees (see **Table 4.8-10**). As indicated in **Table 4.8-12**, Baylands development would result in an 80,000-mile daily decrease in regional (nine-county Bay Area) VMT under cumulative Year 2040 conditions (105,000 miles with construction of Candlestick interchange improvements). VMT operations impacts would, therefore, be less than significant.

[173] South San Francisco's encroachment permit application and standard requirements can be found at https://southsanfranciscoca.prelive.opencities.com/files/assets/public/v/1/public-works/documents/encroachment-permit-application.pdf.

Program EIR Mitigation Measures

The Program EIR did not include any mitigation measures for vehicle miles traveled impacts.

b. Threshold TRA-2: Facilitate Transit, Bicycle, and Pedestrian Travel Modes

Methodology for Determining Significance

The Baylands Specific Plan would cause a significant impact if it would:

- Inhibit pedestrian or bicycle travel or use of transit.
- Conflict with plans related to the use of transit, bicycle, or pedestrian travel modes expressed in the following plans:
    - Brisbane General Plan
    - Plan Bay Area 2050
    - Bay Trail Regional Plan

To determine whether the Specific Plan would enhance or inhibit the use of public transit, as well as pedestrian and bicycle mobility, the analysis below examines the extent to which the Specific Plan's proposed bicycle and pedestrian facilities would provide (1) a viable alternative to vehicular travel within the Specific Plan area, (2) access to the Bayshore Caltrain station, and (3) the extent to which Baylands bicycle and pedestrian facilities provide connections to facilities outside of the Baylands.

Impact Assessment

Pedestrian and Bicycle Systems

Pedestrian and Bicycle Connections within the Baylands

As presented in **Figure 3-44** and **Figure 3-45**, sidewalks would be constructed on all roadways within the Specific Plan area along with a network of on-street bikeways and off-street pathways that would connect internally throughout the Baylands.

Pedestrian and Bicycle Connections between the Baylands and Adjacent Areas

While the off-street trails and sidewalks that would be constructed by Baylands development, including the Bay Trail, would provide safe and comfortable access for people walking and bicycling throughout the Baylands, they would not consistently connect to off-site facilities in a manner designed for people of all ages and physical abilities.

As shown in **Figure 4.8-8**, the Specific Plan would provide connections to Visitacion Valley and off-site transit facilities (Muni and SamTrans stops on Bayshore Boulevard) through sidewalks and Class IV bicycle facilities and to Downtown Brisbane and Crocker Park via off-street multi-use trails at Old Country Road and the Crocker Park Recreational Trail. Specific Plan buildout would connect Little Hollywood and Downtown Brisbane through existing sidewalks and bicycle facilities on Tunnel Avenue.

Also identified on **Figure 4.8-8** are existing locations with inadequate connections between the Baylands and adjacent areas, as well as routes that include an inadequate mixing of people walking or bicycling with vehicles. These inadequate connections include:

- Lack of an ADA-compliant pathway connecting to Guadalupe Canyon Parkway due to a lack of sidewalks along the east side of Bayshore Boulevard. Implementation of the Bayshore Mobility Plan outlined in Section 3.3.3 of the Project Description would provide this improvement.
- Connections between the portion of the Bay Trail to be constructed within the Baylands to sections of the Bay Trail to the north and south.
    - The Specific Plan does not provide for a connection of the Bay Trail to the north that would be suitable for people of all ages and physical abilities. Coordination with Candlestick interchange improvements and Bay Trail improvements to the north in San Francisco along Alana Way are needed.
    - The Bay Trail south of the Baylands is a Class II facility along Sierra Point Parkway, which has a speed limit greater than 25 mph and does not meet the criteria for use by people of all ages and physical abilities.[174] MTC is exploring design options for improvements along this portion of the existing Bay Trail.

Transit Facilities

The Specific Plan provides an on-site shuttle system connecting users within the Baylands to the Caltrain Bayshore Station along with the plaza adjacent to the station to enhance the use of transit. As noted above, the Bi-County Transportation Study has long provided for the establishment of bus rapid transit along the Geneva Avenue extension that would connect to both the BART and Caltrain systems. To that end, the Bi-County Transportation Study calls for a six-lane roadway cross-section providing two travel lanes and a BRT lane in each direction.

The Baylands Specific Plan provides a six-lane roadway section on either side of the bridge crossing of the Caltrain right-of-way with only a four-lane cross section on the bridge itself. This would require rapid transit buses to merge with vehicular traffic to cross the bridge. The four-lane bridge cross-section proposed in the Specific Plan is inconsistent with the concept of bus

[174] See MTC Resolution No. 4493 at https://mtc.ca.gov/sites/default/files/documents/2022-05/Resolution-4493_approved.pdf.

rapid transit embodied in the Bi-County Transportation Study, 2013 PSR, and the Brisbane General Plan.

The Specific Plan was also determined to be consistent with the types of development patterns envisioned by Plan Bay Area 2050 through the San Francisco / San Mateo Bi-County Area PDA but inconsistent with MTC transit-oriented development policies (see **Table 4.3-2**). While the Specific Plan's transportation features are generally consistent with local and regional plans and policies, although the Specific Plan provides comprehensive pedestrian bicycle and pedestrian systems within the Specific Plan area, some pedestrian/bicycle connections would be inadequate (see **Figure 4.8-8**).

Bayshore Mobility Plan

Construction impacts related to the Bayshore Mobility Plan are included in the analyses undertaken for Threshold TRA-1, above. The Bayshore Mobility Plan would widen sidewalks along both sides of the roadway and add a multi-use Class I path along the west (southbound) side of the roadway. The plan would also provide protected intersections at locations with vulnerable roadway users such as school children crossing Bayshore Boulevard at Main Street traveling to and from the proposed middle school within the Baylands.

Consistency with Local and Regional Plans for Transit, Bicycle, and Pedestrian Travel Modes

The Specific Plan's consistency with Brisbane General Plan transportation policies and programs was analyzed in **Table 4.3-1** along with its consistency with other General Plan policies. As demonstrated in that table, the Specific Plan is consistent with the General Plan

Construction of the Relocated Fire Station No. 81 at 140 Valley Drive

Relocation of Fire Station No. 81 to 140 Valley Way would preclude use of the existing pedestrian crosswalk and bus stop at that location. Should construction activities cause a temporary loss of either the crosswalk or bus stop, a significant impact would result.

Significance Conclusion for Impact TRA-2

Figure 4.8-8 identifies several inadequate bicycle and pedestrian connections that would result from Specific Plan development. In addition, the proposed four-lane roadway cross-section for the Geneva Avenue bridge would be inconsistent with planned bus rapid transit improvements along the Geneva Avenue extension. These inadequate connections and Geneva Avenue bridge roadway cross-section would constitute significant physical changes to the environment for the following reasons:

- Inadequate bicycle and pedestrian connections would require vehicular travel to make trips that would otherwise be made by bicycle or walking.

Figure 4.8-8: Analysis of Off-Site Pedestrian and Bicycle Connections

SOURCE: Fehr & Peers, 2024.

- Elimination of dedicated BRT lanes on the Geneva Avenue bridge is inconsistent with the Bi-County Transportation Study, 2013 PSR, and the Brisbane General Plan. Requiring rapid transit buses to merge with vehicular traffic on the Geneva Avenue bridge would defeat the purpose of BRT, which is to facilitate use of bus transit by providing dedicated lanes for buses, thereby increasing travel speeds. Forcing rapid transit buses to use vehicular travel lanes to cross the bridge would be a disincentive for the use of BRT, and it would encourage additional use of private automobiles, thereby increasing VMT. Eliminating BRT lanes on the Geneva Avenue bridge would also slow emergency response vehicles crossing the bridge and increase response times, particularly during peak travel times.
- Relocation of Fire Station No. 81 to 140 Valley Way would preclude the use of the existing pedestrian crosswalk and bus stop at that location, which could cause a temporary or long-term loss of the crosswalk, bus stop, or both. In addition, traffic control devices installed at the fire station to ensure safe ingress and egress of fire apparatus could result in temporary delays or create traffic safety hazards if not property designed.

Program EIR Mitigation Measures

No Program EIR Mitigation Measures are being carried forward.

Additional Mitigation Measures

MM TRA-2a: Eliminate Inadequate Pedestrian and Bicycle Connections. Prior to or concurrent with approval of the Baylands Specific Plan, the following modifications shall be made to the Baylands Specific Plan to ensure provision of adequate pedestrian and bicycle connections and provide continuous bus rapid transit lanes across the Geneva Avenue extension:

- Sidewalks shall be provided on the east side of Bayshore Boulevard along the Specific Plan frontage consistent with the Bayshore Mobility Plan as approved by the Brisbane City Engineer.
- Connections between the portions of the Bay Trail to be provided within the Baylands and the existing Bay Trail segments north of the Baylands shall be designed and constructed to be ADA compliant as approved by the Brisbane City Engineer.
- Provide off-site improvements shown on Figure 4.8-8 to provide a safe and accessible pedestrian and bicycle network to local and regional destinations to ensure that the project does not create a situation where there is inadequate mixing for people walking or bicycling with vehicles to off-site destinations.

- The Bay Trail shall be connected through a protected path of travel along Sierra Point Parkway (either a two-way shared use pathway or protected Class IV bicycle facilities if the right-of-way for a shared use path to Bay Trail standards is infeasible), connecting to the proposed Bay Trail extension on the north side of Sierra Point Parkway at Marina Boulevard. Similar improvements shall be provided on the northern end of the Bay Trail within the Baylands.
- Off-site improvements shall comply with the Supplemental Design Guidelines presented in Appendix E to EIR Appendix F.1 and shall be constructed in coordination with the on-site facilities that these are connecting.

MM TRA-2b: Provide for Continuous Bus Rapid Transit Lanes along the Geneva Avenue Extension through the Baylands. A six-lane roadway section shall be provided along the Geneva Avenue extension, including the bridge over the Caltrain right-of-way consisting of two vehicular travel lanes and one bus rapid transit lane in each direction. The roadway cross-section for the Geneva Avenue extension shall be consistent with the approved 2013 Project Study Report or as approved by the Brisbane City Engineer.

MM TRA-2c: Improvements within the Roadway Right-of-Way at 140 Valley Drive. Relocation and reconstruction of existing facilities in the public right-of-way and/or placement of new facilities (including, but not limited to, traffic control devices to ensure safe ingress and egress of fire apparatus) shall be determined by and constructed as approved by the City Engineer.

Significance Conclusion for Impact TRA-2 with Implementation of All Mitigation Measures

Mitigation Measure MM TRA-2a requires the Specific Plan to eliminate inadequate bicycle and pedestrian connections and provide an adequate roadway section on the Geneva Avenue bridge. Mitigation Measure MM TRA-2b ensures that the bridge design provides bus rapid transit and minimizes the potential for conflicts at its western end. Mitigation Measure MM TRA-2c ensures the continued availability of the bus stop and crosswalk at 140 Valley Drive and that any traffic control devices to provide safe ingress and egress of fire apparatus would not adversely affect safe traffic, transit, and pedestrian movement. Unless otherwise specified, these measures would be implemented concurrent with design and construction of the transportation facilities to which these measures apply.

Impact TRA-2 would therefore be less than significant with mitigation incorporated.

c. Threshold TRA-3: Hazards to Vehicles, Bicyclists, or Pedestrians

Methodology for Determining Significance

Construction

Impact TRA-3 addresses roadway safety during construction. A significant impact would result if Baylands construction activities would cause roadway safety hazards.

Transportation Design Hazards

"Transportation design hazards," as analyzed below, refer to the Specific Plan's engineering aspects (e.g., speed, turning movements, complex designs, distance between street crossings, sightlines) that may cause a greater risk of collisions that result in serious or fatal physical injury than a typical transportation facility. Greater risks could be due to the combination of high vehicle travel speeds and design features that obstruct, hinder, or impair reasonable views by drivers traveling on the same street or restrict the ability of a driver to stop the motor vehicle short of a collision. This analysis focuses on hazards that could reasonably occur during construction or routine operations, and the potential for Specific Plan development to exacerbate baseline hazardous conditions or create new hazardous conditions for people walking, bicycling, or driving, or for public transit operations.

The City of Brisbane has adopted the California Highway Design Manual for street design standards. An assessment of transportation design hazards was conducted consistent with the Caltrans recommended guidance, Local Development Intergovernmental Review (LDIGR) Safety Review Practitioners Guide[175] to identify whether any design hazards would result from Specific Plan development.

As part of the Baylands TIA (EIR Appendix F.1), Fehr & Peers analyzed the extent of vehicle queues at freeway off-ramps adjacent to the Baylands in relation to Brisbane General Plan Policy C.3, which states: "… Design turning movements and traffic signal timing at freeway interchanges to avoid queueing of vehicles from the intersection onto the freeway mainline." Fehr & Peers also assessed the potential for this condition to result in hazardous conditions along the US 101 freeway. This fulfills the recommendation stated in Caltrans' LDIGR Safety Review Practitioners Guide (Caltrans 2020b) to review off-ramp queues when "Queuing at off-ramps resulting in slow or stopped traffic on the mainline or speed differentials between adjacent lanes." Traffic conditions were evaluated using methods developed by the Transportation Research Board (TRB), as documented in the *Highway Capacity Manual, 7th Edition* (HCM 7th Edition) for

[175] Caltrans, Traffic Safety Bulletin 20-02-R1: Interim Local Development Intergovernmental Review Safety Review Practitioners Guidance, December 18, 2020. This document can be found at https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/sb-743/2020-12-22-updated-interim-ldigr-safety-review-guidance-a11y.pdf.

vehicles. The existing Alana and Harney Way interchange, Geneva Avenue extension, and future Candlestick / Harney Way interchange were analyzed using VISSIM, a microsimulation analysis tool that accounts for the congestion interactions between tightly spaced intersections.

Safe Routes to School

Constructing a middle school within the Baylands and converting the existing grade PK–8 Bayshore School to serve grades PK–5 would require Baylands elementary school students and Daly City middle school students to cross Bayshore Boulevard, among other changes in students' routes to school that would result from Specific Plan development. A number of the routes to school that students now take to the Bayshore School and would be used for access to the Baylands middle school are included in San Mateo County's Safe Routes to School High Injury Network. The impact assessment below evaluates the extent to which Baylands development and establishment of a middle school within the Baylands would change student travel patterns to and from school. Should a substantial increase occur in students walking or bicycling on High Injury Network roadways, a significant impact would result. A significant impact would also result if the design of the Baylands middle school would lead to queueing of vehicles dropping off or picking up students, causing safety hazards for vehicles, pedestrians, or bicycles.

Impact Assessment

Construction

While construction activities are temporary conditions and do not result in permanent changes to the transportation network, Baylands construction activities are expected to occur over a 17-year period from 2027 through 2042 (see **Table 3-8**). Along with improvements to existing roadways, Specific Plan and off-site infrastructure construction would require temporary use of roadway rights-of-way for activities, such as staging of construction materials or equipment within the sidewalk or adjacent parking areas and/or travel lanes.

Construction of the Specific Plan and related off-site infrastructure would require trenching work within roadway rights-of-way for installation of potable water, recycled water, wastewater, electric, and telecommunication lines. Construction activities will also require temporary use of the public roadway rights-of-way for staging of construction materials and equipment within sidewalks, parking lanes, travel lanes, or adjacent parkways. Construction-related vehicles traveling to and from construction work areas would share travel lanes with other vehicles. In general, Baylands construction activities can result in obstructions or temporary changes to the public right-of-way, requiring temporary lane closures and detours or temporary narrowing of lanes.

As a standard requirement, applicants for site-specific development and infrastructure projects would be required to apply for encroachment permits and prepare Traffic Control Plans for any construction activity that occurs within the City's right-of-way to comply with Brisbane

Municipal Code Chapter 12.04. In addition, construction activities affecting state facilities, such as the US 101 interchanges at Alana Way, Beatty Avenue, and Sierra Point Boulevard are subject to Caltrans encroachment permits. The City of South San Francisco also requires permits for construction within rights-of-way, such as for the construction of recycled water lines within the Airport Boulevard right-of-way.

Baylands-related development would cause temporary lane closures and narrowing of travel lanes subject to the provisions of encroachment permits for construction within Brisbane, South San Francisco, Daly City, and Caltrans rights-of-way. Standard requirements, including compliance with encroachment permit procedures and the California Manual on Uniform Traffic Control Devices (Caltrans 2024), would ensure safe travel during construction.

Soil materials to be moved from the east side of the Baylands to the west side will be hauled by trucks following a 3.8-mile route using a combination of off-road haul routes and public streets that were indicated above in **Figure 3-53**. During peak times for site grading, approximately 640 daily round trip truck hauls would occur, including approximately 160 round trip truck hauls in the AM peak hour and 160 round trip truck hauls in the PM peak hour. Such high volumes of haul trucks during typical commute hours (7:00 a.m. to 9:00 a.m. or 4:00 p.m. to 6:00 p.m.) would coincide with peak hour traffic and result in safety hazards for pedestrian and bicycle circulation, including children walking and bicycling to school in the morning and to a lesser degree, walking and bicycling home from school in the afternoon.

Roadway Design and Other Hazards

The Specific Plan proposes a new network of roadways and other transportation facilities, including sidewalks, bikeways, and transit facilities. The Specific Plan states that new transportation facilities would be consistent with FHWA, ADA, California Highway Design Manual, California Manual on Uniform Traffic Control Devices, and the Metropolitan Transportation Commission's Complete Streets Policy.

In general, the Specific Plan includes similar land uses to those in surrounding neighborhoods and does not propose changes to these roadways in San Francisco or Daly City. The project thus would not introduce incompatible land uses nor substantially change the nature of how vehicles use these roadways in San Francisco or Daly City through geometric changes. Therefore, the Specific Plan would not worsen hazardous conditions on roadways outside of the City of Brisbane.

The Specific Plan designates 25 mile per hour speed limits on local and collector streets and 35 mile per hour speed limits on arterial roadways. Travel lanes range from 10 to 12 feet, depending on the speed limit and type of facility. The Specific Plan accounts for the needs of larger vehicles, such as with 12-foot travel lanes for the BRT lanes on Geneva Avenue[176] and for

[176] As noted in the analysis of Impact TRA-2, the Specific Plan does not propose BRT lanes on the Geneva Avenue bridge over the Caltrain right-of-way. Mitigation Measure MM TRA-2b would require continuous BRT lanes along the Geneva Avenue Extension through the Baylands from Bayshore Boulevard to Beatty Avenue.

trucks on arterials connecting to on- and off-ramps with few abutting land uses, such as Sierra Point Parkway and Lagoon Road. Mixed-flow travel lanes on Geneva Avenue, Tunnel Road, and collector roadways are 11 feet wide, except for the inside lane on Geneva Avenue which would be 10 feet wide. Travel lanes on local streets and green streets would be 10 feet wide to meet minimum fire code access, with traffic calming features on the green streets to reduce speeds below 25 miles per hour. These lane widths are consistent with Caltrans design standards and reduce the potential for speeding and the creation of hazardous conditions through avoiding excessively wide travel lanes.

The Specific Plan also includes the following design features to reduce hazards for roadway users:

- Sidewalks that meet ADA standards;
- High-visibility crosswalks with curb extensions;
- Short block lengths and high intersection density with frequent pedestrian crossings that creates a walkable environment in pedestrian-oriented areas;
- Raised crosswalks at unsignalized intersections and leading pedestrian intervals at signalized intersections;
- Protected bicycle facilities, protected intersections, and bicycle boxes;
- Designation of pickup and drop-off zones to organize rideshare, taxi, and commercial deliveries into curbside or convenient garage spaces to minimize loading activity in travel lanes;
- Prohibition of driveways on regional arterials and roadways with protected bicycle lanes and pedestrian-oriented streets; and
- Center turn lanes on collector and arterial streets to facilitate and reduce conflicts between vehicles turning in and out of driveways.

Baylands development would modify some existing roadways and create new roadways. These modifications have the potential to introduce hazardous conditions if they do not meet relevant standards. An assessment of the modified or proposed roadway facilities within or fronting the Baylands are presented below, by facility type.

Regional Arterials

Bayshore Boulevard currently serves as a route for regional travel and often can present a barrier to walking or bicycling given the width of the roadway, high speeds, and limited locations with sidewalks or places to cross. Bayshore Boulevard in Brisbane is included in the C/CAG high-injury network prepared as part of C/CAG's Local Roadway Safety Plan, due to a combination of high vehicle travel speeds (35 to 45 mph speed limit) along Bayshore Boulevard that could lead to improper mixing or separation of roadway users, particularly if people

driving do not have adequate sight distance or people driving consistently exceed the posted speed limits due to inadequate design speeds. Contributing factors include the following:

- Driveways and unsignalized intersections used by slow turning vehicles and cross traffic;
- Transit stops without adequate turnouts;
- Crosswalks; and
- Unprotected bicycle facilities.[177]

Along with added multi-modal connections to Bayshore Boulevard through intersections with collector, local, green streets, and sidewalks along the length of the Baylands frontage, vehicular, bicycle, and pedestrian traffic generated by the Specific Plan could exacerbate existing hazards related to the conditions described above along Bayshore Boulevard.

The Specific Plan does not propose any driveways along Bayshore Boulevard but does propose that green shared streets and local roadways would have unsignalized access on Bayshore Boulevard. In addition, unsignalized intersections of green streets and local roadways with Bayshore Boulevard could tempt pedestrians to cross and bicyclists to attempt left turns onto Bayshore Boulevard. Further, the local street between Specific Plan blocks A2 and A4 would be off-set across Bayshore Boulevard from the existing SFMTA lot, which could exacerbate existing hazardous conditions by creating an off-set unsignalized intersection on a regional arterial.

While the Specific Plan proposes the "West Rail Trail" at the foot of Icehouse Hill to provide bicycle and pedestrian access to the sports fields, it is unclear if adequate room is available for the trail outside of the Caltrain right-of-way without requiring grading at the foot of Icehouse Hill.

Geneva Avenue. The geometrics of the proposed Geneva Avenue bridge and one-way frontage roads at the western touchdown of the bridge include conflicting eastbound automobile and bicycle movements that create the potential for a safety hazard by requiring bicyclists traveling east onto the bridge to cross automobile traffic traveling at the posted speed limit of 35 miles per hour in the middle of the intersection. The automobile traffic could go onto the bridge or go onto the frontage road, which would require crossing the pathway for people bicycling. The Specific Plan does not propose protected intersection features to transition bicyclists between the Class IV facilities to Class II facilities, and the separation of Class IV bikeways does not meet NACTO guidance for separated bike facilities on roadways with 35 miles per hour speed limits, as recommended for use by MTC's Complete Streets Policy.

[177] These are all characteristics that are identified as important when reviewing access management per the Caltrans' LDIGR Safety Review Practitioners Guide: https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/sb-743/2020-12-22-updated-interim-ldigr-safety-review-guidance-a11y.pdf

Minor Arterials

Tunnel Avenue. Existing Recology and Golden State Lumber facilities include large, slow-moving industrial vehicles that require turning movements on, off, and across Tunnel Avenue. The existing Golden State Lumber parking lot also includes perpendicular parking spaces that require existing vehicles to back up directly onto Tunnel Avenue. The substantial increase of Specific Plan-generated automobiles traveling at higher speeds than industrial vehicles along Tunnel Avenue, including those entering and exiting Specific Plan driveways, would exacerbate existing safety hazards. The Specific Plan does not provide turn lanes for project driveways, and there are numerous locations along Tunnel Avenue that would meet warrants for traffic signals or roundabouts to facilitate safe access to connecting roadways. The combination of increased traffic volumes, slow-moving trucks, high travel speeds, and existing parking conditions necessitate cars to back into the roadway when exiting has the potential to create hazardous conditions on Tunnel Avenue.

Sierra Point Parkway. At full Specific Plan buildout, queueing of southbound vehicles exiting the US 101 freeway would exceed the southbound off-ramp storage at Lagoon Way, causing a line of stopped vehicles on the off-ramp to routinely extend back onto the US 101 mainline, presenting safety hazards on the freeway mainline.

Collectors

Main Street and Campus Parkway. The Specific Plan proposes retaining the existing signalized Bayshore Boulevard intersection at Industrial Way while extending Main Street to the east into the Baylands at a new signal along Bayshore Boulevard only 275 feet to the south. An additional traffic signal is proposed within the Specific Plan area along Main Street less than 300 feet east of Bayshore Boulevard. These closely spaced intersections would present safety hazards, particularly at the Bayshore Boulevard intersections at Industrial Way and Main Street.

Roundhouse Circle; East and West Park Boulevard. Roundhouse Circle is proposed in the Specific Plan as a roundabout, while East and West Park Boulevard are proposed as one-way streets in a couplet configuration. Each of these one-lane roadways is proposed to have a single 11-foot travel lane, 8-foot parking lane, and 9-foot Class IV bike lane, including the buffer. The Brisbane Municipal Code notes that 20 feet of clearance must be provided for emergency vehicle access, which does not typically include a raised buffer or a Class IV bike lane, as proposed by the Specific Plan. As a result, these roadways would not meet the City standards for fire access. In addition, because of the continuous curve along Roundhouse Circle, the 8-foot parking lane that would be typical on a straight street would need to be widened to 10 feet to safely accommodate parked cars out of travel lanes.

Green Shared Streets

The City of Brisbane does not have design standards for this type of street, which introduces the potential for conflicts between people driving, walking, and bicycling within the same roadway if there are excessive vehicle speeds or inadequate sight distances. According to the FHWA, these streets should encourage low motor vehicle speeds and low motor vehicle volumes (FHWA 2017). Appropriate traffic volumes and speeds as expressed by FWHA or other agencies with shared streets, such as San Francisco (SFMTA 2023b),[178] include setting targets for no more than 1,000 vehicles per day with median vehicle speeds of 15 miles per hour or less. The short, one-block lengths of the Green Shared Streets proposed in the Specific Plan and design features such as vertical deflection (e.g., raised crossings), horizontal deflection (e.g., chicanes), textured paving (e.g., cobbles), as well as the physical and visual narrowing of the field of vision for drivers, would encourage slow speeds and would also limit the number of vehicles that would be expected to use these streets.

The Specific Plan does not identify where specific driveways would be located or set standards for their separation, but all the development blocks fronting green streets include at least two block faces where driveways could be located. If multiple blocks were to have vehicular access from one Green Shared Street, daily vehicle trip generation could exceed 1,000 vehicles per day for blocks with the highest potential number of residential units. The highest number of potential residential units fronting a green shared street are the streets between blocks B4 and B7 and between blocks B7 and B11 (225 and 245 units, respectively). Based on an average trip generation rate, including the required TDM plan, for the attached single-family units of 4.64 vehicle trips per day, these streets would have 1,045 and 1,137 vehicle trips per day. All other streets would include less than 1,000 vehicles accessing the abutting land uses.

Safe Routes to School

Changes in Routes to School

Currently, all students within the Bayshore School District reside in Daly City and travel to school within that City. With Baylands development and a new middle school within the Baylands, the routes that Daly City students will take to school will change and may be dramatically different, as described below and illustrated in **Figure 4.8-9**.

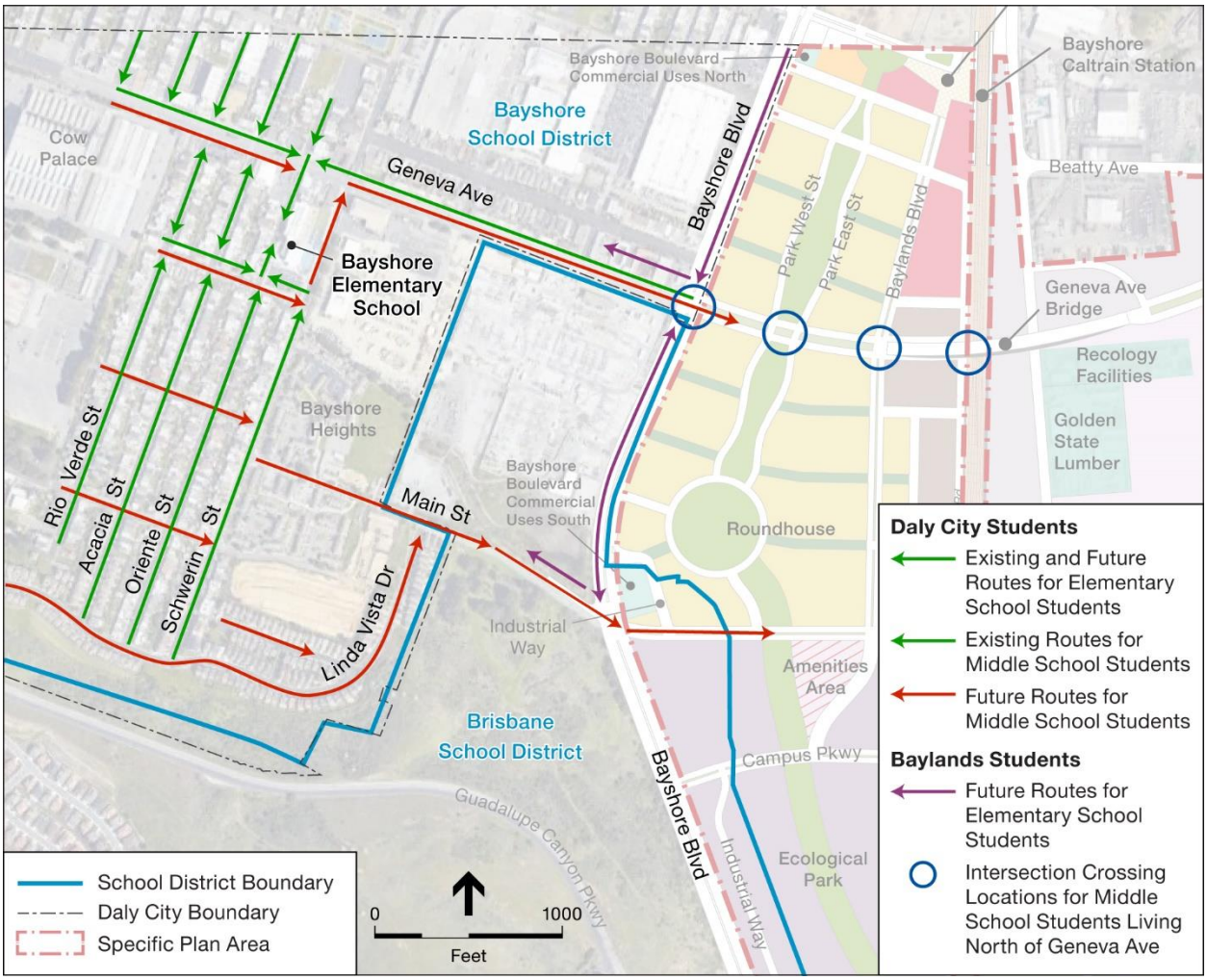
- **Daly City students living south of Geneva Avenue**
    - ***Existing.*** The majority of elementary and middle school students living south of Geneva Avenue travel north on Rio Verde Street, Acacia Street, Oriente Street, or Schwerin Street, each of which are included on the San Mateo County Safe

[178] SFMTA's *Slow Streets Evaluation 2023* report includes evaluation metrics of maintaining fewer than 1,000 vehicles and vehicle speeds 15 miles per hour or less. This report indicates that collisions on Slow Streets have decreased by 48 percent.

Routes to School High Injury Network. Some students living close to Geneva Avenue may travel north to Geneva Avenue and may travel along that street to Oriente Street and the Bayshore School.

- ***Future.*** Elementary school students would continue attending the Bayshore School using current routes to school. Middle school students would attend school within the Baylands and would either travel (1) east to Linda Vista Drive and Main Street, crossing Bayshore Boulevard at Main Street to get to school[179] or (2) north to Geneva Avenue and east across Bayshore Boulevard into the Baylands.

Figure 4.8-9: Changes in Students' Routes to School



[179] The 500-foot portion of Main Street, west of Bayshore Boulevard within the City of Brisbane, currently lacks sidewalks.

- **Daly City students living north of Geneva Avenue**
    - ***Existing.*** Elementary and middle school students living north of Geneva Avenue are required to cross Geneva Avenue, with many also traveling short distances along that roadway.

    Future. Elementary school students would continue attending the Bayshore School and using current routes to school. Middle school students would attend school within the Baylands and would travel east along Geneva Avenue, crossing Bayshore Boulevard either at Geneva Avenue or Main Street.

- **Baylands students**
    - ***Elementary school students.*** Baylands students would be required to cross Bayshore Boulevard and would do so at one of the two signalized intersections—Geneva Avenue or Main Street. Depending on their place of residence and where they cross Bayshore Boulevard, students may travel along Bayshore Boulevard.
    - ***Middle school students.*** Baylands students would travel local streets to the Baylands school. Students living north of Geneva Avenue would be required to cross Geneva Avenue and would do so at one of the signalized intersections along Geneva Avenue.

Modes of travel for the routes described above include being driven by parents, walking (either with or without parents[180]), and bicycling. Travel distances to school for Daly City students attending school within the Baylands and Baylands students attending the Bayshore School would typically range from 0.25 to 1.75 miles, depending on the specific route. Based on Baylands student generation projections and the existing grades of students at the Bayshore School, it is anticipated that 132 Daly City middle school students and 337 Baylands elementary school students could cross Bayshore Boulevard on a daily basis.

Student Pick-Up and Drop-Off at the Proposed Middle School

The proposed middle school within the Baylands is anticipated to be located along Main Street, which will also function as one of the Baylands' main access points to and from Bayshore Boulevard. The National Center for Safe Routes to School identifies various ways that a school drop-off and pick-up zone can become dangerous for children in the "What's wrong with this picture?" photographs shown in **Figure 4.8-10a** and **Figure 4.8-10b** that illustrate a "variety of situations that are chaotic and potentially unsafe" (SRTS, no date).

[180] Elementary school students walking to school would typically be more likely to do so with rather than without their parents.

Figure 4.8-10a: Potential Hazards at School Drop-off and Pick-up Zones

This drop-off and pick-up site employs some useful strategies including striping, signs and enforcement, but it is not working. The pictures show the chaos along the curb and in the street. Note the double parking, erratic behavior and dangerous mix of pedestrians and motor vehicles.

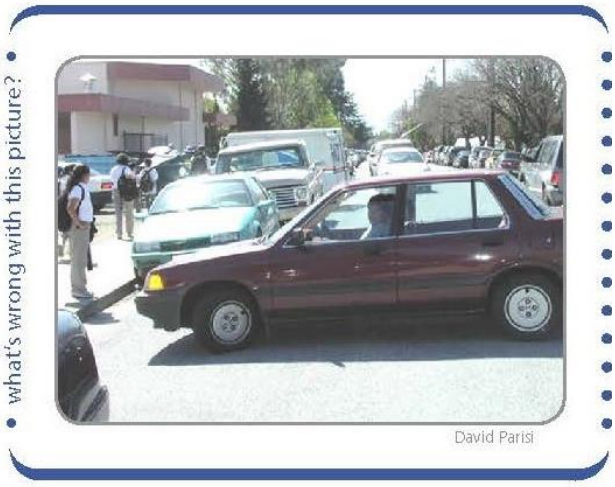
Motor vehicles are parked in the school crosswalk.

Motor vehicles are driving in the wrong direction. Children are exiting motor vehicles in the middle of the street.

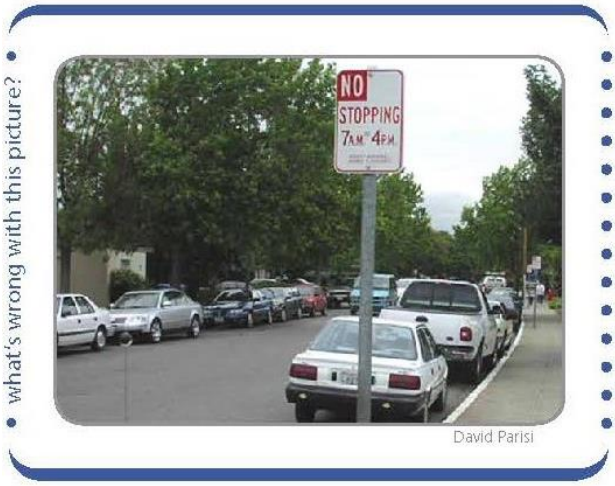
SOURCE: Safe Routes to School Guide, Student Drop-Off and Pick-Up, http://guide.saferoutesinfo.org/pdf/SRTS-Guide_Dropoff-Pickup.pdf.

Figure 4.8-10b: Potential Hazards at School Drop-Off and Pick-Up Zones

This small child is running across a busy parking lot unaccompanied.



The driver of this motor vehicle is making a U-turn in the school drop-off and pick-up zone.



Motor vehicles are parked along the NO STOPPING zone when they should not be.

The school utilizes orange cones to mark the drop-off and pick-up lanes and a driver still performs an illegal U-turn.

SOURCE: Safe Routes to School Guide, Student Drop-off and Pick-up. http://guide.saferoutesinfo.org/pdf/SRTS-Guide_Dropoff-Pickup.pdf.

Vehicle Queueing on Freeway Off-Ramps

Table 4.8-13 presents projecting vehicle queueing on the US 101 freeway off-ramps at the completion of Phase 1 and at full Specific Plan buildout both without and with the Specific Plan development project. Vehicle queues are expected to exceed the off-ramp storage capacity and routinely cause vehicles to back up onto the freeway mainline while waiting to exit the freeway.

Table 4.8-13: 95th Percentile Vehicle Queues at US 101 Off-Ramps that Exceed the Ramp Storage Length and Extend to the Mainline with Mitigation Measures

US 101 Off-Ramp	Storage Length[a]	Completion of Phase 1 (assumed to be 2035)		Full Specific Plan Buildout (assumed to be 2040)		
		With Project	Recommended Configuration[b]	With Project	With Project & Candlestick Interchange	With Project & Recommended Configuration
Candlestick Interchange Southbound Off-Ramp[c]	1,275 (1,025)	Adequate storage	Adequate storage	**Exceed** (AM and PM)	Adequate storage	Adequate storage
Candlestick Interchange Northbound Off-ramp[c]	3,250 (2,500)	**Exceed** (PM Only)[c]	Adequate storage	**Exceed** (PM Only)	Adequate storage	Adequate storage
Sierra Point Southbound Off-Ramp	1,370 (1,050)	Adequate storage	Adequate storage	**Exceed** (AM and PM)	**Exceed** (AM and PM)[d]	Adequate storage
Sierra Point Northbound Off-Ramp[e]	1,620	Adequate storage	Adequate storage	Adequate storage	Adequate storage	Adequate storage

SOURCE: Fehr & Peers, 2024.

NOTES: Detailed operational results are presented in Appendix F.1.

a. Storage length with the Project at Sierra Point Parkway. Storage lengths with the Candlestick Interchange are shown in parentheses.
b. Recommended configuration include the Candlestick Interchange, as studied through the 2013 Candlestick Interchange PSR for consistency with the San Francisco / San Mateo Bi-County Transportation Study, and a roundabout at Sierra Pont Parkway southbound US 101 ramps.
c. PM peak hour 95th percentile off-ramp queues would extend to the mainline but not exceed the gore point. Without the project, less than 75 percent of the vehicle demand would be served during the peak hour due to downstream local roadway congestion that limits the throughput of the off-ramp. The Project would increase the potential for off-ramp vehicle queues to routinely extend to the mainline by adding vehicles to the queues on the off-ramp and on Alana Way under US 101 without the project.
d. Without the Project, 95th percentile queues would extend over 1,300 feet and fill the off-ramp but would not extend onto the mainline. The Project would relocate the stop control for this intersection from the existing Lagoon Road intersection to a new four-way intersection with Lagoon Road and Sierra Point Parkway (including the new northern leg for the extension) at the US 101 southbound ramps. The Project would shorten the storage length for the off-ramp from 1,350 feet to approximately 1,050 feet in addition to adding the northern Sierra Point Parkway extension and signalizing the intersection.
e. The traffic signal that opened in April 2024 is included in the analysis of all future analysis scenarios. The worsening of vehicle queues at the Northbound off-ramp is associated with demand generated by land use growth at Sierra Point as the Specific Plan would contribute less than 5 percent of future traffic volumes, which does not represent a substantial contribution. Therefore, addressing these queues will be the responsibility of those pending but not approved projects.

This is anticipated under most scenarios due to the land use growth and project traffic increases within the area along the San Francisco/San Mateo County line by 2035 when the first phase of Baylands development is anticipated to be completed and worsen by 2040 when Baylands development is completed. Land use growth expected by mid-term 2035 without project conditions would increase traffic congestion on Alana Way under US 101 and the northbound Harney Way off-ramp in the PM peak hour such that additional Specific Plan traffic would be added as vehicles queued on the northbound off-ramp, causing overall vehicle queues to routinely exceed the storage capacity of the northbound off-ramp at Harney Way. Vehicle queuing conditions would continue to worsen as the Baylands and other area projects build out.

The Candlestick Interchange as proposed through the Bi-County Study and 2013 Project Study Report would adequately serve the off-ramp volumes at this interchange and queues would not routinely exceed storage capacity. However, vehicle queues on the Sierra Point Parkway southbound ramp would continue to exceed the ramp storage during both peak hours. The

Specific Plan would shorten the storage length of the southbound off-ramp by relocating Lagoon Road north to a new four-way signalized intersection at the US 101 freeway ramps and Sierra Point Parkway.

Significance Conclusion for Impact TRA-3

Construction

Specific Plan development would be required to conform to the requirements of the City's encroachment permit process, Program EIR Mitigation Measure 4.N-12 (carried forward to this EIR as MM TRA-3a), encroachment permit procedures, and California Manual on Uniform Traffic Control Devices regulations, which establish traffic operations and management rules during construction for working safely and causing the least possible interference with people walking, bicycling, driving, or taking transit near the construction area. However, the large number of trucks hauling soils from the eastern to the western portion of the Baylands would conflict with pedestrian and bicycle movement and cause safety hazards, particularly for children before and after school hours. A significant impact would therefore result.

Operations

In relation to operations, Impact TRA-3 would be significant due to the following reasons:

- Closely spaced intersections along Bayshore Boulevard at Industrial Way and Main Street, as well as along Main Street at Industrial Way would present safety hazards.
- The proposed Geneva Avenue bridge section with 44 feet (four 11-foot lanes) for vehicle travel and no shoulders could adversely affect the ability of police and fire response across the Caltrain right-of-way along Geneva Avenue in an emergency, particularly during peak travel hours, by not providing drivers with the ability to pull over.
- Roadway cross-sections for Roundhouse Circle, East Park Boulevard, and West Park Boulevard do not provide a 20-foot clear zone for emergency response vehicles, instead providing an 11-foot travel lane, 7-foot Class IV bike lane, and a 2-foot raised buffer for emergency response, which would not meet City standards for fire access. In addition, because of the continuous curve along Roundhouse Circle, the 8-foot parking lane that would be typical on a straight street would need to be widened to 10 feet to safely accommodate parked cars out of travel lanes.
- Should the proposed sports fields between Icehouse Hill and the current Brisbane Fire Station be constructed prior to relocation of the fire station, conflicts with fire station emergency access would occur. In addition, adequate right-of-way for the Specific Plan's "West Rail Trail" may not be available outside of the Caltrain right-of-way to provide access to the fields without requiring grading at the easterly foot of Icehouse Hill.

- Students would be required to travel along a 500-foot section of Main Street west of Bayshore Boulevard within the City of Brisbane that does not currently have sidewalks. In addition, there would be a substantial increase in students walking or bicycling along Geneva Avenue and Bayshore Boulevard on a daily basis. Both of these are high speed facilities identified as San Mateo County High Injury Network roadways.
- Depending on the ultimate design of the middle school within the Baylands, vehicle queueing for student pick-up and drop-off could conflict with and create hazards for safe vehicular, bicycle, and pedestrian travel in the vicinity of the middle school.
- In combination with regional growth, the Specific Plan would contribute to vehicle queues that would routinely extend back onto the US 101 mainline at the existing Candlestick Interchange off-ramps at the terminus of the Geneva Avenue extension and at the northbound off-ramps at Harney Way. These vehicle queues are unlikely to be resolved through routine Caltrans ramp queue management given the vehicle queues that would extend along Geneva Avenue, Alana Way, and Harney Way.

Program EIR Mitigation Measures

MM TRA-3a: Construction Management Plans (Program EIR Mitigation Measure 4.N-12). In conjunction with all construction permits, site-specific development and infrastructure projects subject to City of Brisbane approval shall develop, submit for City review and approval, and implement Construction Management Plans that specify measures that would reduce impacts on motor vehicle, bicycle, pedestrian, and transit circulation. The Construction Management Plans shall include, but not necessarily be limited, to the following:

- Location of construction staging areas for materials, equipment, and vehicles.
- Notification procedures for adjacent property owners and public safety personnel regarding when major deliveries, detours, and lane closures will occur.
- Identification of haul routes for movement of construction vehicles that would minimize impacts on vehicular and pedestrian traffic, circulation, and safety; and provision for monitoring surface streets used for haul routes so that any damage and debris attributable to the haul trucks can be identified and corrected by the project applicant.
- Provisions for removal of trash generated by construction activity.
- A process for responding to, and tracking, complaints pertaining to construction activity, including identification of an on-site complaint manager.

MM TRA-3b: Closely Spaced Intersections on Geneva Avenue (Program EIR Mitigation Measure 4.N-1g). Approval of any tentative map providing for spacing of less than 1,200 feet between full-access intersections along the Geneva Avenue extension shall require that the interactions of green and red signal timing at any one intersection along the Geneva Avenue extension shall not affect operations at any other intersection along the extension, by backing traffic waiting for a green signal at one intersection along the Geneva Avenue extension into another intersection along the extension. Should full-access intersections along the Geneva Avenue extension with spacing of less than 1,200 feet be proposed, a microsimulation of all proposed intersections along the extension (e.g., Synchro, VISSUM) shall be undertaken to analyze interactions of green and red signal timing and demonstrate that operations at any one intersection along the Geneva Avenue extension would not affect operations at any other intersection along the extension.

MM TRA-3c: Loading Areas (Program EIR Mitigation Measure 4.N-17). Each site-specific development and infrastructure project shall provide sufficient loading and unloading areas in appropriate locations such that loading and unloading activities, including vehicle queuing, will not block roadway or on-site parking area travel lanes, or bicycle or pedestrian facilities.

Significance Conclusion with Implementation of Program EIR Mitigation Measures

Mitigation measures MM TRA-3a through MM TRA-3c address transportation safety issues analyzed in the Program EIR. However, analysis of the 2025 Specific Plan project identified several additional safety hazards that would result from the proposed development that could not have been known at the time of Program EIR preparation. Thus, significant impacts would remain following implementation of mitigation measures MM TRA-3a through MM TRA-3c, requiring additional mitigation.

Additional Mitigation Measures

MM TRA-3d: City Design Standards and Supplemental Roadway Design Guidelines for the Brisbane Baylands. Baylands roadways shall comply with the City's design standards and the supplemental roadway design guidelines set forth in EIR Appendix F.1, as determined by the City Engineer.

MM TRA-3e: Site Distance at Intersections and Driveways. Roadway improvement plans and proposed site-specific development and infrastructure projects shall also demonstrate adequate sight distance to meet the City's design standards at roadway intersections, driveways, and parking and loading areas prior to receiving construction permits.

MM TRA-3f: Bayshore Boulevard Improvements. Specific Plan development shall be responsible for the following improvements along Bayshore Boulevard to reduce hazardous conditions.

- Implement the Bayshore Mobility Plan (EIR Appendix F.1) or pay a fair share fee in lieu of improvements. At a minimum, Baylands development shall provide the following improvements along Bayshore Boulevard:
  - Allow right-turn access only for all unsignalized local and green streets that intersect Bayshore Boulevard, with features described in the Supplemental Roadway Design Guidelines (EIR Appendix F.1) and the Bayshore Mobility Plan (EIR Appendix F.1) and to ensure that speed differential does not result in hazardous conditions through adequate lane geometry and sight distances. Alternatively, left-turn access could be approved by the City Engineer following submittal and City review of substantial evidence that such access would not result in vehicle queues blocking through lanes, unsafe turning movements, inadequate sight distance, excessive speeds on local and green streets, or unsafe attempts by pedestrians to cross Bayshore Boulevard or bicyclists to make unsafe left turns.
  - Eliminate or convert the intersection of Bayshore Boulevard and Industrial Way from a traffic signal to a side-street stop-controlled intersection that allows right-turn in and out only, with the primary vehicular access to the southern portion of the Roundhouse District provided through Main Street.

    Provide side-street stop-controlled intersection and prohibit westbound left turns at the intersection of Main Street at the driveway east of Bayshore Boulevard adjacent to development block C2, which is shown as a traffic signal in the specific plan. Alternatively, the project applicant shall prepare a traffic study, including signal warrants and operational analysis that demonstrates the configuration of closely two spaced signalized intersections on Main Street would have adequate stacking distances to prevent peak hour vehicle queues to extend from one intersection to another.
- The above measures shall be implemented in coordination with construction of new or modified intersections along and Bayshore Boulevard frontage improvements.

MM TRA-3g: Geneva Avenue Improvements. Modify the cross-section of the Geneva Avenue bridge to provide six through lanes (four lanes for vehicular travel and two lanes for bus rapid transit as required by MM TRA-2b). In addition to the features

described in the Specific Plan, Specific Plan development shall provide the following improvements:

- Modify the design of the western touchdown of the Geneva Avenue bridge to eliminate conflicting movements between bridge traffic and frontage roads, or between vehicles and bicycles by removing the eastbound frontage road or through a frontage road design that conforms to City design standards and the Supplemental Design Guidelines presented in Appendix F.1 for approval by the City Engineer.
- Redesign the roadway to provide adequate separation for bicyclists (minimum 2 feet for roadways with 35 miles per hour speed limits) to match NACTO standards.
- Specific Plan development shall contribute fair share payments for Candlestick Interchange improvements.

Construct the above measures in coordination with construction of the Geneva Avenue extension, which would require the addition of BRT lanes to the Geneva Avenue bridge over Caltrain and the construction of the Geneva Avenue bridge in coordination with the Phase 1 development.

MM TRA-3h: Green Streets. In addition to the features described in the Specific Plan, Specific Plan development shall provide the following to reduce hazardous conditions:

- Implement the design standards in the Supplemental Design Guidelines in (EIR Appendix F.1) to slow median vehicle speeds to 15 mph or slower and reduce the potential for conflicts between roadway users while ensuring adequate emergency access.
- Provide driveways on at least two block faces for each development block on green streets to reduce the concentration of vehicles on any one green street. Alternatively, the project applicant could demonstrate through a traffic study using the trip generation information presented in this study that traffic volumes on the green street would not exceed 1,000 vehicles per day.
- Establish and maintain a monitoring program for traffic volumes and speeds on green streets to ensure that daily vehicle volumes average 1,000 vehicles or less and that median vehicle speeds are 15 miles per hour or less as approved by the City Engineer. Should the monitoring program find that average daily vehicle volumes are more than 1,000 vehicles or that median vehicle speeds exceed 15 miles per hour, additional features consistent with the Supplemental Roadway Design Guidelines to slow

traffic speeds and reduce the potential for cut through traffic shall be implemented as approved by the City Engineer at the Baylands' expense.

Construct the above features in coordination with construction of the green streets.

MM TRA-3i: Main Street and Campus Parkway Intersections at Bayshore Boulevard. In addition to the features described in the Specific Plan, Specific Plan development shall provide protected intersection features at the signalized intersections of Bayshore Boulevard with Main Street and Campus Parkway consistent with those presented in the Supplemental Roadway Design Guidelines (EIR Appendix F.1).

MM TRA-3j: Roundhouse Circle and East and West Park Boulevard. In addition to the features described in the Specific Plan, Specific Plan development shall provide the following improvements to reduce hazardous conditions:

- Modify the roadway cross-sections for Roundhouse Circle as well as East and West Park Boulevard to provide a minimum continuous 20-foot-wide fire access that is not part of a parking lane, bicycle facility, or buffer as approved by the City Engineer and North County Fire Authority.
- Modify the cross-section for Roundhouse Circle to provide for a 10-foot parking lane.
- Provide stop signs for local roadways connecting to Roundhouse Circle and provide at least one marked pedestrian crossing location per intersection that meets the standards set forth in the Supplemental Roadway Design Guidelines (EIR Appendix F.1).

Construct the above features in coordination with construction of these local roadways.

MM TRA-3k: Tunnel Avenue. Tunnel Avenue shall be upgraded to current codes and standards per General Plan Program C.5a. In addition to the features described in the Specific Plan, Specific Plan development shall provide the following improvements to reduce hazardous conditions:

- Provide a two-way left-turn lane north of Lagoon Road or turn pockets at all driveways with adequate stacking distance to allow southbound vehicles to access driveways for existing and project land uses without stopping in the southbound through lane.
    - Design access features to provide adequate access for large trucks in and out of the Golden State Lumber site, along with safe movement of personal vehicles, such as through traffic controls or modified access

into parking facilities. These features shall be designed to ensure that personal vehicles or trucks do not back out onto Tunnel Avenue.

- Provide roundabouts, if approved by the City engineer (or traffic signals if roundabouts are not approved) at intersections of minor arterial and collector streets, including Lagoon Road, Beatty Avenue, the roadway connecting Tunnel Avenue to Geneva Avenue, East Campus Road, and Visitacion Creek North to facilitate access to the East Campus land uses, unless an improvement is demonstrated by substantial evidence approved by the City Engineer not to be warranted at a specific location.

Construct the above measures in coordination with other infrastructure as follows: (1) the segment of Tunnel Avenue at Golden State Lumber to the north in coordination with the Geneva Avenue extension; and (2) the segment to the south of Golden State Lumber prior to opening of the land uses in the Campus East District or in coordination with the Lagoon Road reconstruction.

MM TRA-3l: Sierra Point Parkway. In addition to the features described in the Specific Plan, Specific Plan development shall provide the following to reduce hazardous conditions:

- Provide a roundabout at the intersection of Sierra Point Parkway and Lagoon Road/US 101 southbound on- and off-ramps as part of the realignment of Lagoon Road, if approved by Caltrans (or a traffic signal if Caltrans does not approve a roundabout). This intersection shall be designed to allow for the continuation of the Bay Trail through this intersection consistent with the features presented in the Supplemental Roadway Design Guidelines (EIR Appendix F.1).

Construct the above in coordination with the existing City of Brisbane plans to add a roundabout or traffic signal at this off-ramp to support anticipated traffic growth associated with development at Sierra Point.

MM TRA-3m: Access to Community Fields. If it is to be constructed prior to relocation of the existing Fire Station No. 81, Community Fields Park shall maintain safe and prioritized access for emergency response vehicles at all times to the satisfaction of the Brisbane Public Works Director and North County Fire Authority. In addition, the design of the West Rail Trail shall not encroach into the Caltrain right-of-way and Machinery & Equipment property. Neither shall construction of the West Rail Trail be permitted to grade into the easterly foot of Icehouse Hill.

MM TRA-3n: Safe Routes to School. A sidewalk or multi-use path shall be provided along Main Street west of Bayshore Boulevard within the City of Brisbane to provide a

safe route to school for students to the proposed middle/high school within the Baylands as approved by the Brisbane City Engineer.

In addition, Specific Plan development shall provide the following safe routes to school improvements:

- High visibility crosswalks using striped pattern with ladder markings made of high visibility material, such as thermoplastic tape instead of paint shall be provided at the following locations:
    - The intersections of Bayshore Boulevard at Geneva Avenue and at Main Street, which shall also be provided with protected intersection designs.
    - All intersections along Geneva Avenue between Bayshore Boulevard and the Caltrain right-of-way, as well as at intersections around the Baylands middle school.
    - Sidewalks on the east side of Bayshore Boulevard along the Specific Plan frontage.
- Crosswalks shall be provided no more than 250 to 500 feet apart along the frontage of the middle school to adequately accommodate students crossing at controlled locations.
- Provide school crossing guards at the intersections of Bayshore Boulevard at Geneva Avenue and at Main Street before and after school.
- Limit speed to 15 miles per hour within 500 feet of the school when children are present at the school.
- Advance Stop Bars shall be provided at stop-controlled or signalized crosswalks within 500 feet of the middle school to reduce vehicle encroachment into the crosswalk. This feature shall be designed in a manner consistent with advanced stop lines in compliance with national guidance provided in Section 3B.16 of Caltrans; the Manual on Uniform Traffic Control Devices.

The design of the middle school within the Baylands shall incorporate a combination of curb painting, stenciled directions within drop-off and pick-up areas, off-street queueing lanes, signage, and temporary barricades and traffic cones to:

- Separate vehicles from bicycles and pedestrians and safely direct vehicular and non-vehicular movement;
- Provide safe places for students to exit vehicles;

- Maintain through travel lanes on adjacent streets; and
- Provide easy egress routes for vehicles after dropping off or picking up students to minimize unsafe or disruptive vehicle turning movements.

MM TRA-3o: Continued Access to Recology, Golden State Lumber, Kinder Morgan, and Other Lands. Access via public street(s) to Recology, Golden State Lumber, Kinder Morgan Tank Farm, and other lands east of the Caltrain tracks that are not owned by the Specific Plan applicant shall be maintained at all times.

Significance Conclusion for Impact TRA-3 with Implementation of all Mitigation Measures

Implementation of Mitigation Measures MM TRA-3a through MM TRA-3o, including the improvements summarized in **Figure 4.8-11a** through **Figure 4.8-11c** would ensure that Specific Plan development would adhere to applicable design standards and minimize Specific Plan-related transportation hazards.

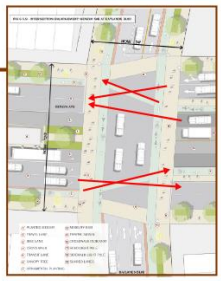
Compliance with Brisbane's design standards and Baylands Supplemental Roadway Design Guidelines presented in Appendix F.1 would ensure that new facilities meet relevant standards and support the provision of adequate sight lines, protection for roadway users, and accommodation of loading activities.

- **Bayshore Boulevard:** The Bayshore Mobility Plan would include signal preemption, bus and emergency vehicle queue jumps, median breaks, and a shared use path that can accommodate emergency vehicles for short distances to bypass queues. It would reduce hazardous conditions along Bayshore Boulevard by providing adequate access control and complete street facilities to support multi-modal travel and increased pedestrian crossings of the roadways.
- **Geneva Avenue:** The potential for hazardous conditions along the Geneva Avenue extension and at the adjacent off-ramps would meet the relevant design standards and minimize hazardous conditions. The removal of the Geneva Avenue frontage roads would not preclude access to land uses because no driveways would be allowed along these frontages in the proposed project. The traffic volumes using the Geneva Avenue frontage roads would be low (approximately 50 vehicles or less during the peak hours), and these vehicles could use Baylands Boulevard and the parallel local roadways to access the proposed parking garage driveways. Thus, the redistribution of this traffic to other local roadways would not substantially change traffic circulation nor create secondary impacts within the project site. The Candlestick Interchange would reduce the potential for vehicle queues to extend back to the US 101 mainline.

Figure 4.8-11a: Transportation Facility Improvement Summary: Bayshore District

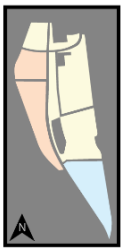
Bayshore/Local Street and SFMTA Lot:
The Project shall allow continued access to the SFMTA lot and not allow left-turns into project site unless a traffic study is completed demonstrating that this can be adequately through a site distance and operations analysis.

Bayshore/Local Streets and Bayshore/Green Streets:
All intersections on Bayshore with local and green streets shall be Right-in and Right-out only. A sight distance analysis shall be prepared to demonstrate adequate sight distance for transition between high speed and low speed roadway with features presented in Supplemental Design Guidelines, such as the addition of turn pockets or other signage and striping features.



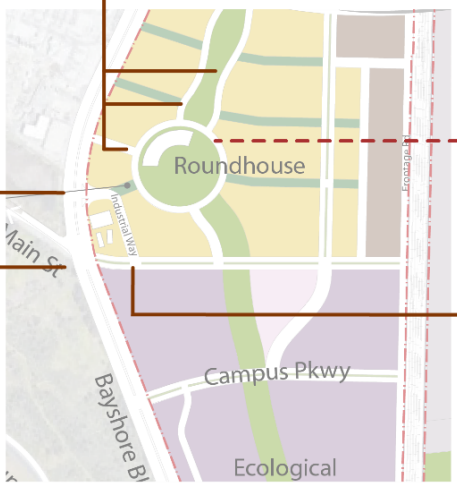
Geneva Bridge:
Remove conflicting movements between automobile and bicycle traffic, such as through the removal of the Geneva Avenue Frontage Road. Removal of the frontage road will also reduce the severity of the bottleneck at this intersection by reducing the required number of signal phases.

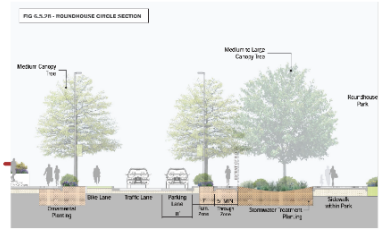
Figure 4.8-11b: Transportation Facility Improvement Summary: Roundhouse and Icehouse Hill District



Roundhouse Park, East Park Boulevard, and West Park Boulevard:
Roadway cross-sections for Roundhouse Circle as well as East and West Park Boulevard shall be modified so as to provide a continuous 20-foot-wide fire access as approved by the North County Fire Authority. Intersections on Roundhouse Park shall be stop controlled rather than yield-controlled.

Main St and Industrial Way Signals:
The Project shall remove the Industrial Way signal and convert to a side-street stop with southbound left-turns prohibited to remove inadequate spacing between signals.





Main St and Campus Parkway:
The Project shall provide protected intersection features to allow bicyclists to comfortably connect between the existing Bayshore Boulevard Class II bicycle lanes and the proposed Class IV bicycle facilities.

Signalized Intersections with Main St:
The Project shall remove the Main Street signal and convert to a side-street stop with westbound left-turns prohibited to remove inadequate spacing between signals.

Figure 4.8-11c: Transportation Facility Improvements: Campus East District

- **Tunnel Avenue:** Hazardous conditions along Tunnel Avenue would be minimized by providing additional capacity for left turns and improvements to meet relevant design standards.
- **Sierra Point Parkway:** Hazardous conditions along Sierra Point Parkway would be minimized by providing improvements that would avoid queues on southbound US 101 offramps from extending back onto the freeway mainline and reducing conflicts between (1) people walking and bicycling on the Bay Trail and (2) vehicular traffic through the intersection of Lagoon Road.
- **Main Street and Campus Parkway:** Required improvements would allow bicyclists to comfortably connect between the existing Bayshore Boulevard Class II bicycle lanes and the proposed Class IV bicycle facilities.
- **Roundhouse Circle and East and West Park Boulevard:** Required improvements would improve emergency access and reduce the potential for the inadequate mixing of people walking and bicycling with vehicles.
- **Green Streets:** Required improvements would reduce the potential for the hazardous mixing or separation of people walking and bicycling with vehicles.

- **Off-Site Connections for People Walking and Bicycling:** Required improvements to off-site connections to adjacent neighborhoods outside of the Project would reduce the potential for inadequate mixing of walking and bicycling trips generated by the Project with vehicles.

Unless otherwise specified, these measures would be implemented concurrent with design and construction of the transportation facilities to which these measures apply.

Air Quality Mitigation Measure MM AQ-1f requires construction of an overland conveyor system to transport excavated soil material from the eastern portion of the site to the western portion in lieu of transport by trucks.

Impact TRA-3 would therefore be less than significant with mitigation incorporated.

d. Threshold TRA-4: Access for Emergency Response and Evacuation

Methodology for Determining Significance

To evaluate emergency access during construction, analyses undertaken for Impact TRA-1 and TRA-3 were reviewed to determine whether roadway diversions or safety issues caused by construction activities would adversely affect emergency response and evacuation.

To evaluate emergency access during operations, the analysis of Impact TRA-4 reviewed whether the Specific Plan area, each Development District, and each development block would have a minimum of two points of access. A review of roadway cross-sections and other design criteria was also undertaken in relation to whether Baylands development would facilitate or hinder the ability of emergency service operators to access streets and buildings or to conduct operations.

The 2025 Specific Plan project would cause a significant impact if construction would impair emergency response or evacuation. A significant operations impact would occur if an inadequate number of access points were to be provided for the Specific Plan area, a Development District, or individual blocks such that potential evacuation operations would interfere with emergency response or if roadway or site design would hinder the ability of fire and police emergency responders to access streets and buildings or to conduct operations within the Specific Plan area.

Impact Assessment

Construction

As discussed in Impact TRA-1, construction activities within public rights-of-way would be subject to encroachment permit requirements, and any work in public rights-of-way would

reduce roadway disruptions, provide for safe travel, and require compliance with the Manual on Uniform Traffic Control Devices (MUTCD). However, during peak times for site grading, approximately 640 daily round trip truck hauls would occur, including approximately 160 round trip truck hauls in the AM peak hour and 160 round trip truck hauls in the PM peak hour, which would follow the 3.8-mile route indicated above in **Figure 3-53**. Such high volumes of haul trucks during typical commute hours (7:00 a.m. to 9:00 a.m. or 4:00 p.m. to 6:00 p.m.) would almost wholly occupy the inbound Tunnel Avenue bridge during the construction day, substantially reducing emergency vehicle access.

Operations

Bayshore Boulevard, Geneva Avenue, Tunnel Avenue, Lagoon Road, and Sierra Point Parkway would provide arterial roadway access to the Specific Plan and the City of Brisbane as a whole. These roadways would also serve as the primary evacuation routes in the event of an emergency, requiring an evacuation. These routes connect to the rest of the Bay Area region through interchanges with the US 101 freeway adjacent to the Baylands and along Bayshore Boulevard to the north and south of the Baylands.

The Specific Plan proposes to extend Geneva Avenue from its existing terminus at Bayshore Boulevard through the Specific Plan area, providing access to the US 101 freeway at the existing Candlestick Point interchange in two phases. At part of Phase 1 Baylands development, Geneva Avenue would be extended east, terminating at the Caltrain right-of-way. The Specific Plan proposes to extend Geneva Avenue to connect to the US 101 Candlestick interchange as part of Phase 2 development, including construction of a bridge over the Caltrain right-of-way.

The Specific Plan proposes to extend Sierra Point Parkway from its current terminus at the US 101 southbound on- and off ramp near Lagoon Road north through the site to the Geneva Avenue extension. Lagoon Road would also be realigned to directly connect with the existing US 101 southbound on- and off ramp.

These roadway extensions would improve emergency access to the City of Brisbane by providing multiple routes that emergency service providers could use if an existing roadway became inaccessible. Additional access to regional routes would be provided through the proposed Specific Plan's network of local and collector roadways that would provide multiple routes via a connected grid street network. The Specific Plan would also supplement the City's existing emergency evacuation centers, including Sierra Point and Mission Blue Recreation Center, with new public open spaces both west and east of the Caltrain right-of-way that could serve as additional evacuation locations within the City.

As discussed in Section 4.14, *Hydrology and Water Quality*, the drainage system provided in the Specific Plan does not ensure that key roadways (Sierra Point Parkway, Lagoon Road, Geneva Avenue, and Tunnel Avenue) would be available as evacuation routes in a 100-year storm event. The Baylands Infrastructure Study acknowledges that existing flooding in two areas

would continue and "require measures by others to adapt to future conditions" and address flood conditions.

The Specific Plan, each Development District, and each block within the Specific Plan area are connected through at least two points of access and have at least 20-foot-wide through zones that can allow emergency service providers to reach individual parcels, even if evacuees are leaving the site in the opposite direction. However, as noted above, the Specific Plan does not propose 20-foot-wide through zones for emergency service providers along Roundhouse Circle, East Park Boulevard, or West Park Boulevard. The Specific Plan proposes that each of these one-lane roadways would have a single 11-foot travel lane, 8-foot parking lane, and a 7-foot Class IV bike lane, along with a 2-foot buffer. The Municipal Code requirements for 20 feet of clearance for emergency vehicle access does not typically include a raised buffer and Class IV bike lane as proposed by the Specific Plan, which would not meet City standards for fire access.

As discussed in Chapter 3, *Project Description*, the City's existing fire station is proposed to be relocated to 140 Valley Drive across from City Hall and the Brisbane Police Station. Once it is complete, the relocated fire station would house the existing Engine Company No. 81 and a new aerial ladder company to serve buildings over 75 feet in height. Development of a second fire station to serve the eastern portion of the City is proposed during Phase 2 Baylands development. The North County Fire Authority has identified the preferred location for this second station as being adjacent to US 101 between Beatty Avenue and the Geneva Avenue extension. As previously noted, the Specific Plan proposes a 6-lane cross-section for the Geneva Avenue extension with the exception of the bridge section where BRT lanes would be merged into vehicular travel lanes, and a 4-lane bridge for vehicle travel would be provided with no shoulders.

Per California Vehicle Code (CVC) 21806, drivers must yield the right-of-way to emergency vehicles and remain stopped until the emergency vehicle passes. In general, this means that emergency vehicle access would not be significantly impacted where drivers are able to pull over. The proposed Geneva Avenue bridge section with 44 feet (four 11-foot lanes) for vehicle travel and no shoulders could adversely affect emergency access, particularly during peak travel hours by not providing drivers with the ability to pull over. Bayshore Boulevard south of Geneva Avenue has large roadway shoulders that provide ample room for drivers to pull over, and the Bayshore Mobility Plan presented in Appendix F.1 would provide multiple features for emergency vehicles to bypass queues, including emergency traffic signal priority, median breaks, and queue jumps. However, Bayshore Boulevard, north of Geneva Avenue, as well as Tunnel Avenue and Blanken Avenue have less shoulder space for vehicles to pull over out of the way and do not include these emergency pre-emption features.

Significance Conclusion for Impact TRA-4

Construction

The large volume of haul trucks on the existing two-lane Tunnel Avenue bridge during site grading would substantially reduce emergency vehicle access. A significant impact would therefore result.

Operations

The Specific Plan's proposed roadway network would provide multiple routes that could be used for emergency response should an existing roadway become inaccessible. Additional access to regional routes would be provided by local and collector roadways that would provide multiple routes via a connected grid street network. In addition, the Bayshore Mobility Plan would maintain the ability for emergency vehicles to bypass traffic on Bayshore Boulevard by providing emergency traffic signal priority, median breaks, and queue jumps.

The proposed Geneva Avenue bridge section four-lane roadway section with no shoulders could adversely affect emergency access, particularly during peak travel hours by not providing drivers with the ability to pull over, resulting in a significant impact.

The Specific Plan's cross sections for Roundhouse Circle, East Park Boulevard, and West Park Boulevard would not meet minimum City standards, resulting in a significant impact.

During a 100-year storm event, portions of key roadways such as Tunnel Avenue would not be available as an evacuation route, which would hinder emergency access. Emergency access would also not be available to development sites along Frontage Road, including basement parking areas, resulting in a significant impact.

Program EIR Mitigation Measures

Program EIR Mitigation Measure 4.N-12 (now numbered Mitigation Measure MM-TRA-3a) establishes a process for preparing and implementing Construction Management Plans that specify measures to reduce impacts on motor vehicle, bicycle, pedestrian, and transit circulation. This measure, which the Program EIR requires be submitted to the City for review and approval, would supplement requirements for Brisbane encroachment permits for construction activities proposed within Brisbane rights-of-way of each agency by addressing construction staging, haul routes, and removal of trash and debris from areas outside of roadway rights-of-way.

Significance Conclusion with Implementation of Program EIR Mitigation Measures

While construction activity within a Caltrans, South San Francisco, or Daly City right-of-way would require issuance of an encroachment permit from that agency, Program EIR Mitigation

Measure 4.N-12 did not address encroachments outside of Brisbane or ensure coordination between the multiple permits that may be issued for a specific infrastructure improvement. Such improvements include the construction of recycled water lines (Brisbane and South San Francisco), realignment of Lagoon Road (Brisbane and Caltrans), or extension of electrical lines to the Martin Substation (Brisbane and Daly City). Lack of coordination would cause traffic to back up and thereby impair emergency response. In addition, Program EIR mitigation measures did not address emergency response impacts of soils hauling on the Tunnel Avenue bridge. Thus, significant impacts would remain with implementation of Mitigation Measure MM TRA-3a (Program EIR Mitigation Measure 4.N-12), requiring additional mitigation measures.

Additional Mitigation Measures

Construction

Implementation of Mitigation Measures MM TRA-3a through MM TRA-3c would ensure adequate emergency response through construction zones within roadways affected by the 2025 Specific Plan project by ensuring that through lanes would be maintained at all times during project construction.

Operations

Implementation of Mitigation Measure MM TRA-2b would require continuous bus rapid transit lanes along the Geneva Avenue extension, including the bridge over the Caltrain rail line. The bus rapid transit lanes would facilitate emergency response across the bridge and along the entirety of Geneva Avenue, even during peak travel hours.

Mitigation Measure MM TRA-3d would require Specific Plan roadways to meet City design standards and Supplemental Roadway Design Guidelines developed for the Baylands. Implementation of this measure would ensure availability of 20-foot-wide through zones that would allow emergency service providers to reach specific locations along Roundhouse Circle, East Park Boulevard, and West Park Boulevard, regardless of the direction or mode of travel taken by evacuees leaving the site.

In addition, Air Quality Mitigation Measure MM AQ-1f would require construction of an overland conveyor system to transport excavated soil material from the eastern portion of the site to the western portion in lieu of transport by trucks and Mitigation Measures MM HWQ-4a and MM HWQ-4b would ensure adequate emergency response access during a 100-year flood event.

Significance Conclusion for Impact TRA-4 with Implementation of all Mitigation Measures

Implementation of Mitigation Measures MM TRA-2b, MM TRA-3a through 3d, MM AQ-1f, MM HWQ-4a, and MM HWQ-4b would ensure adequate emergency response access, including emergency access during a 100-year flood event. Unless otherwise specified, these measures would be implemented concurrent with design and construction of the buildings and transportation facilities to which these measures apply.

Impact TRA-4 would therefore be less than significant with mitigation incorporated.

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4.9 AIR QUALITY

4.9.1 INTRODUCTION

a. Overview

This section evaluates the effects that the 2025 Specific Plan project would have on air quality, including technical analyses prepared by Environmental Science Associates (ESA), for which modeling results are provided in Appendix G. This section evaluates whether the Specific Plan would result in a cumulatively considerable net increase of any criteria pollutant for which the region is in non-attainment, expose sensitive receptors to substantial pollutant concentrations, create objectionable odors that would affect a substantial number of people, or conflict with or obstruct implementation of the applicable air quality plan for the San Francisco Bay Area Air Basin. The analyses in this section evaluate both the types and quantities of air pollutant emissions that would be generated on a temporary basis due to on- and off-site construction and those that would be generated from long-term use of the Specific Plan area.

b. Definitions

Air basin refers to an area defined by geographic features that create a distinctive regional climate and have similar meteorological and geographic conditions. California has 15 distinct air basins. The Specific Plan is located within the San Francisco Bay Area Air Basin. Unless specified otherwise, "air basin" as used in this document refers to the San Francisco Bay Area Air Basin.

Air district refers to the body responsible for managing air quality on a regional level. California is currently divided into 35 air districts. The Specific Plan is located within the boundaries of the Bay Area Air Quality Management District (BAAQMD).

Air pollutants are the foreign and/or natural substances occurring in the atmosphere that may result in adverse effects on humans, animals, vegetation, and/or materials.

Ambient air quality represents existing air conditions in a given area.

Ambient Air Quality Standards are the health- and welfare-based standards prescribed by the U.S. Environmental Protection Agency (USEPA) and the California Air Resources Board (CARB) for outdoor air that identify the maximum acceptable average concentrations of air pollutants during a specified period.

Attainment refers to the status of regions that are meeting the primary standards established by the USEPA within the National Ambient Air Quality Standards (NAAQS) and by CARB within the California Ambient Air Quality Standards (CAAQS) for six major pollutants termed "criteria pollutants," based on data collected at permanent monitoring stations.

Air quality management plan (AQMP) refers to the clean air plan prepared by the BAAQMD for the purpose of bringing the area into compliance with the requirements of the NAAQS and CAAQS ("Spare the Air - Cool the Climate"). AQMPs are incorporated into the State Implementation Plan (SIP).

Area sources of pollution include sources of emissions that are spread over a wide area, such as consumer products, fireplaces, road dust, and farming operations.

Best Available Control Measures (BACMs) represent the most effective measures to reduce fugitive dust emissions from construction sites based on CARB and USEPA guidance.

Criteria air pollutants are those for which acceptable levels of exposure have been determined and for which CARB has set an ambient air quality standard. Such standards have been set for six criteria pollutants: ozone (O_3), carbon monoxide (CO), lead, nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and particulate matter (PM), which consists of PM that is 10 microns in diameter or less (PM_{10}) and PM that is 2.5 microns in diameter or less ($PM_{2.5}$).

- **Ozone.** Ozone is the main component of photochemical smog and is primarily a summer and fall pollution problem. Ozone is not emitted directly into the air but is formed through a complex series of chemical reactions involving other compounds that are directly emitted. Once formed, ozone remains in the atmosphere for one or two days. Ozone is then eliminated through reaction with chemicals on the leaves of plants, attachment to water droplets as they fall to earth (rainout), or absorption by water molecules in clouds that later fall to earth with rain (washout).
- **Carbon Monoxide.** CO, a colorless and odorless gas, is a relatively non-reactive pollutant that is a product of incomplete combustion mostly associated with motor vehicles. CO measurements and modeling were important in the early 1980s when CO levels were regularly exceeded throughout California. In more recent years, CO measurements and modeling have not been a priority in most California air districts due to the retirement of older polluting vehicles, lower emissions from new vehicles, and improvements in fuels.
- **Lead.** Lead is a metal found naturally in the environment and present in some manufactured products. There are a variety of activities that can contribute to lead emissions, which are grouped into two general categories: stationary and mobile sources. On-road mobile sources include light-duty automobiles; light-, medium-, and heavy-duty trucks; and motorcycles.

  Emissions of lead have dropped substantially over the past 40 years. The reduction before 1990 is largely due to the phase-out of lead as an anti-knock agent in gasoline for on-road automobiles. Substantial emission reductions have also been achieved due to enhanced controls in the metals processing industry.

- **Nitrogen Dioxide.** NO_2 is a reddish-brown gas that is a by-product of combustion processes. Automobiles and industrial operations are the main sources of NO_2. Combustion devices emit primarily nitric oxide (NO), which reacts through oxidation in the atmosphere to form NO_2. The combined emissions of NO and NO_2 are referred to as NO_X, which are reported as equivalent NO_2. Aside from its contribution to ozone formation, NO_2 may be visible as a coloring component of a brown cloud on high pollution days, especially in conjunction with high ozone levels.
- **Sulfur Dioxide.** SO_2 is a colorless, extremely irritating gas or liquid that enters the atmosphere as a pollutant mainly from burning high sulfur-content fuel oils and coal, and from chemical processes occurring at chemical plants and refineries. When SO_2 oxidizes in the atmosphere, it forms sulfur trioxide (SO_3). Collectively, these pollutants are referred to as sulfur oxides (SO_X). Major sources of SO_2 include power plants, large industrial facilities, diesel vehicles, and oil-burning residential heaters.
- **Particulate Matter.** PM_{10} and $PM_{2.5}$ consist of particulate matter that is 10 microns or less in diameter and 2.5 microns[181] or less in diameter, respectively. PM_{10} and $PM_{2.5}$ represent fractions of particulate matter that can be inhaled into the air passages and the lungs and can cause adverse health effects. One common source of $PM_{2.5}$ is diesel exhaust emissions. Particulate matter is emitted directly into the air (e.g., fugitive dust, soot, and smoke from mobile and stationary sources, construction operations, fires, and natural windblown dust), and is also formed in the atmosphere by condensation and/or transformation of SO_2 and reactive organic gases (ROGs). Traffic generates particulate matter emissions through entrainment of dust and dirt particles that settle onto roadways and parking lots. PM_{10} and $PM_{2.5}$ are also emitted by burning wood in residential wood stoves and fireplaces and open agricultural burning. $PM_{2.5}$ can also be formed through secondary processes such as airborne reactions with certain pollutant precursors, including ROGs, ammonia (NH_3), NO_X, and SO_X.

Mobile sources refer to sources of air pollution such as automobiles, motorcycles, trucks, off-road vehicles, boats, trains, and airplanes that emit air pollutants while moving and when stopped.

Non-attainment refers to regions that are not meeting the primary standards established by the USEPA within the NAAQS and by CARB within the CAAQS for major pollutants termed criteria pollutants, based on data collected at permanent monitoring stations.

Sensitive receptors include land uses, such as residences, schools, hospitals, children's daycare facilities, elderly care facilities, and similar uses that are particularly sensitive to adverse air quality. A sensitive receptor also includes sensitive populations such as asthmatics, children, and the elderly who are particularly sensitive to air pollution.

[181] A micron is one-millionth of a meter. The width of a single human hair ranges from approximately 10 to 200 microns.

Stationary sources include non-mobile sources such as power plants, refineries, and manufacturing facilities that emit air pollutants from a fixed location.

Toxic air contaminants are defined as air pollutants that may cause or contribute to an increase in mortality or in serious illness, or that may pose a hazard to human health.[182]

4.9.2 ENVIRONMENTAL SETTING

a. Baseline

The baseline for analysis of air quality generally consists of conditions that existed at the release of the second Notice of Preparation during Spring 2023. When existing conditions and analyses address a full year of air quality data, the most recent year for which data is available is used and specific citations are provided indicating the baseline year used for existing conditions and impact analysis purposes. However, in some instances, conditions can vary from year to year, and a summary from recent years is also provided.

b. Climate and Meteorology

The Specific Plan area is in the San Francisco Bay Area Air Basin (air basin). Air quality in the basin is influenced by such natural factors as topography, meteorology, and climate, in addition to the presence of existing air pollution sources and ambient conditions. The air basin's moderate climate steers storm tracks away from the region for much of the year, although storms often affect the region from November through April. Brisbane Bayland's proximity to the onshore breezes stimulated by the Pacific Ocean through the Pacifica Gap provides generally very good air quality at the site and in surrounding communities.

Annual temperatures in the Specific Plan area average in the mid-50s (degrees Fahrenheit), ranging from the low 40s on winter mornings to the mid-70s during summer afternoons. Daily and seasonal oscillations of temperature are small because of the moderating effects of the nearby San Francisco Bay. In contrast to the steady temperature regime, rainfall is highly variable and confined almost exclusively to the "rainy" period from November through April. Precipitation varies widely from year to year as shifts in the annual storm track of a few hundred miles can mean the difference between a very wet year and drought conditions.

Atmospheric conditions such as wind speed and direction, and variable air temperatures interact with the physical features of the landscape to influence the movement and dispersal of air pollutants regionally. Marine air traveling through the Golden Gate, the Pacifica Gap, and the

[182] The majority of the estimated health risks from TACs can be attributed to a relatively few compounds, the most important being particulate matter from diesel-fueled engines. According to CARB, diesel engine emissions are believed to be responsible for about 70 percent of California's estimated known cancer risk attributable to toxic air contaminants and comprise about 8 percent of outdoor $PM_{2.5}$.

Alemany Gap is a dominant weather factor affecting dispersal of air pollutants within the region. The prevailing wind direction at San Francisco International Airport, the nearest wind monitoring station to the Baylands, is from the west at an average annual wind speed of 10.3 miles per hour (WRCC 2009).

c. Ambient Air Quality – Criteria Air Pollutants

As required by the 1970 Federal Clean Air Act, the USEPA initially identified six air pollutants that are pervasive in urban environments and for which state and federal health-based ambient air quality standards have been established. The USEPA calls these pollutants "criteria air pollutants," and the agency has regulated them by developing specific public health-based and welfare-based criteria as the basis for setting permissible levels. *Ozone*, *carbon monoxide* (CO), *particulate matter* (PM), *nitrogen dioxide* (NO_2), *sulfur dioxide* (SO_2), and *lead* are the six criteria air pollutants originally identified by the USEPA. Later, subsets of PM were identified, and permissible levels were established. These include *PM of 10 microns in diameter or less* (PM_{10}) and *PM of 2.5 microns in diameter or less* ($PM_{2.5}$).

The BAAQMD has jurisdiction to regulate air quality within the nine-county air basin. Accordingly, the region's air quality monitoring network provides information on ambient concentrations of criteria air pollutants at various locations in the San Francisco Bay Area. **Table 4.9-1** presents a 5-year summary (2018 to 2022) of the highest annual criteria air pollutant concentrations as recorded at the two air quality monitoring stations that are closest to the Specific Plan area: the San Francisco–Arkansas Street air monitoring station approximately 4 miles north of the Baylands and the Redwood City station approximately 19 miles to the southeast. These monitoring locations are representative of conditions within the Specific Plan area. **Table 4.9-1** also compares these concentrations with the most stringent applicable ambient air quality standards (whether state or federal) and identifies the number of days between 2017 and 2021 that exceeded those standards.

Table 4.9-1: Summary of Bay Area Air Quality Monitoring Data (2018–2022)

Pollutant	Most-Stringent Applicable Standard	Number of Days Standards Were Exceeded and Maximum Concentrations Measured [a]				
		2018	2019	2020	2021	2022
Ozone at San Francisco – Arkansas Street Monitoring Site						
Days 1-Hour Standard Exceeded		0	1	0	0	0
Maximum 1-Hour Concentration (ppm)	>0.090 ppm [b]	0.065	**0.091**	0.088	0.074	0.070
Days 8-Hour Standard Exceeded		0	1	0	0	0
Maximum 8-Hour Concentration (ppm)	>0.070 ppm [c]	0.049	**0.073**	0.055	0.054	0.060
Ozone at Redwood City Monitoring Site						
Days 1-Hour Standard Exceeded		0	**0**	1	0	0
Maximum 1-Hour Concentration (ppm)	>0.090 ppm [b]	0.067	0.083	**0.098**	0.085	0.079

Pollutant	Most-Stringent Applicable Standard	Number of Days Standards Were Exceeded and Maximum Concentrations Measured [a]				
		2018	2019	2020	2021	2022
Days 8-Hour Standard Exceeded		0	**2**	1	0	0
Maximum 8-Hour Concentration (ppm)	>0.070 ppm [c]	0.049	**0.077**	**0.077**	0.063	0.061
Carbon Monoxide (CO) at USEPA San Francisco Monitoring Site						
Days 1-Hour Standard Exceeded		0	0	0	0	0
Maximum 1-Hour Concentration (ppm)	>20 ppm [b]	1.9	1.2	1.8	1.2	1.5
Days 8-Hour Standard Exceeded		0	0	0	0	0
Maximum 8-Hour Concentration (ppm)	>9 ppm [b]	1.6	1.0	1.6	0.9	1.0
Carbon Monoxide (CO) at USEPA Redwood City Monitoring Site						
Days 1-Hour Standard Exceeded		0	0	0	0	0
Maximum 1-Hour Concentration (ppm)	>20 ppm [b]	2.5	2.0	2.1	1.6	1.8
Days 8-Hour Standard Exceeded		0	0	0	0	0
Maximum 8-Hour Concentration (ppm)	>9 ppm [b]	1.7	1.1	1.5	0.9	1.0
Suspended Particulates (PM_{10}) at San Francisco – Arkansas Street Monitoring Site						
Days 24-Hour Standard Exceeded		0	0	2	0	0
Maximum 24-Hour Concentration (µg/m^3)	>50 µg/m^3 [b]	43	42	**102**	32	34
Suspended Particulates ($PM_{2.5}$) at San Francisco – Arkansas Street Monitoring Site						
Days 24-Hour Standard Exceeded		14	0	8	0	0
Maximum 24-Hour Concentration (µg/m^3)	>35 µg/m^3 [c]	**177.4**	25.4	**147.3**	22.4	29.0
Annual Average (µg/m^3)	>12 µg/m^3 [b,c]	11.7	7.6	10.5	7.1	6.8
$PM_{2.5}$ at Redwood City Monitoring Site						
Days 24-Hour Standard Exceeded		13	0	9	0	0
Maximum 24-Hour Concentration (µg/m^3)	>35 µg/m^3 [c]	**120.9**	29.5	**124.1**	30.1	27.4
Annual Average (µg/m^3)	>12 µg/m^3 [b,c]	10.5	7.0	9.8	6.0	6.8
Nitrogen Dioxide (NO_2) at San Francisco – Arkansas Street Monitoring Site						
Days 1-Hour Standard Exceeded		0	0	0	0	0
Maximum 1-Hour Concentration (ppm)	>0.100 ppm [c]	0.069	0.061	0.048	0.050	0.046
NO_2 at Redwood City Monitoring Site						
Days 1-Hour Standard Exceeded		0	0	0	0	0
Maximum 1-Hour Concentration (ppm)	>0.100 ppm [c]	0.077	0.055	0.046	0.047	0.044

SOURCES: California Air Resource Board, Top 4 Summary for the San Francisco – Arkansas Street and Redwood City monitoring sites, 2018–2022, https://www.arb.ca.gov/adam/topfour/topfour1.php, accessed January 19, 2023;
USEPA AirData Air Quality Monitors (arcgis.com), San Francisco and Redwood City monitoring sites, 2018–2022, https://epa.maps.arcgis.com/apps/webappviewer/index.html?id=5f239fd3e72f424f98ef3d5def547eb5, accessed January 19, 2023.

ABBREVIATIONS: N/A = data not available; ppm = parts per million; µg/m^3 = micrograms per cubic meter

NOTES: **Bold** values are in excess of the applicable standard.

a. Number of days exceeded is for all days in a given year, except for particulate matter. PM_{10} is monitored every 12 days. Therefore, the number of days exceeded is out of approximately 30 annual samples.
b. State standard, not to be exceeded; also, a federal standard, not to be exceeded more than once per year.
c. Federal standard, not to be exceeded.

As attainment with air quality standards is determined on a basin-wide basis, it is possible for the basin to be in attainment with state or federal standards for a given pollutant notwithstanding an exceedance for a given pollutant standard at a local monitoring station. Concentrations shown in bold indicate only a localized exceedance of that standard. Lead and SO_2 are not included in this table because ambient lead concentrations are only monitored on an as-warranted basis, and the air basin has never been designated as in non-attainment for SO_2. NAAQS and CAAQS for each of the criteria air pollutants and attainment status for the San Francisco Air Basin are summarized in **Table 4.9-2**.

NAAQS and CAAQS have been set at levels considered safe to protect public health, including the health of sensitive populations such as asthmatics, children, and the elderly with a margin of safety, and to protect public welfare, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings. As explained by CARB, "An air quality standard defines the maximum amount of a pollutant averaged over a specified period of time that can be present in outdoor air without any harmful effects on people or the environment" (CARB 2023b). That is, if a region is "in compliance" with the ambient air quality standards, its regional air quality can be considered protective of public health. The NAAQS are statutorily required to be set by the USEPA at levels that are "requisite to protect the public health."[183] Therefore, the closer a region is to attaining a particular NAAQS, the lower the human health impact is from that pollutant.

[183] 42 U.S. Code Chapter 7409 – National primary and secondary ambient air quality standards, accessed January 19, 2023, https://www.law.cornell.edu/uscode/text/42/7409.

Table 4.9-2: State and Federal Ambient Air Quality Standards and Attainment Status

Pollutant	Averaging Time	State (CAAQS [a])		Federal (NAAQS [b])	
		Standard	Attainment Status	Standard	Attainment Status
Ozone	1 hour	0.09 ppm	**N**	NA	— [c]
	8 hours	0.07 ppm	**N** [d]	0.070 ppm	**N**
Carbon monoxide (CO)	1 hour	20 ppm	A	35 ppm	A
	8 hours	9 ppm	A	9 ppm	A
Nitrogen dioxide (NO_2)	1 hour	0.18 ppm	A	0.100 ppm	U
	Annual	0.030 ppm	NA	0.053 ppm	A
Sulfur dioxide (SO_2)	1 hour	0.25 ppm	A	0.075	A
	24 hours	0.04 ppm	A	0.14	A
	Annual	NA	NA	0.03 ppm	A
Particulate matter (PM_{10})	24 hours	50 µg/m^3	**N**	150 µg/m^3	U
	Annual [e]	20 µg/m^3	**N**	NA	NA
Fine particulate matter ($PM_{2.5}$)	24 hours	NA	NA	35 µg/m^3	**N**
	Annual	12 µg/m^3	**N**	12 µg/m^3	A
Sulfates	24 hours	25 µg/m^3	A	NA	NA
Lead	30 days	1.5 µg/m^3	A	NA	NA
	Cal. Quarter	NA	NA	1.5 µg/m^3	A
	Rolling 3-month average	NA	NA	0.15 µg/m^3	A
Hydrogen sulfide	1 hour	0.03 ppm	U	NA	NA
Visibility-reducing particles	8 hours	— [f]	A	NA	NA
Vinyl chloride	24 hours	0.010 ppm (26 µg/m^3)	No information available	NA	NA

SOURCE: Bay Area Air Quality Management District, *Standards and Attainment Status*, 2021, https://www.baaqmd.gov/about-air-quality/research-and-data/air-quality-standards-and-attainment-status, accessed January 19, 2023.

ABBREVIATIONS: A = Attainment; N = Nonattainment; U = Unclassified; NA = Not Applicable, no applicable standard; ppm = parts per million; µg/m^3 = micrograms per cubic meter

NOTES:

a. CAAQS = State ambient air quality standards (California). CAAQS for ozone, CO (except Lake Tahoe), SO_2 (1-hour and 24-hour), NO_2, particulate matter, and visibility-reducing particles are values that are not to be exceeded. All other State standards shown are values not to be equaled or exceeded.
b. NAAQS = national ambient air quality standards. NAAQS, other than ozone and particulates, and those based on annual averages or annual arithmetic means, are not to be exceeded more than once a year. The 8-hour ozone standard is attained when the three-year average of the fourth highest daily concentration is 0.08 ppm or less. The 24-hour PM_{10} standard is attained when the three-year average of the 99th percentile of monitored concentrations is less than the standard. The 24-hour $PM_{2.5}$ standard is attained when the three-year average of the 98th percentile is less than the standard.
c. The USEPA revoked the national 1-hour ozone standard on June 15, 2005.
d. This state 8-hour ozone standard was approved in April 2005 and became effective in May 2006.
e. State standard = annual geometric mean; national standard = annual arithmetic mean.
f. State-wide visibility-reducing particle standard (except Lake Tahoe Air Basin): Particles in sufficient amount to produce an extinction coefficient of 0.23 per kilometer when the relative humidity is less than 70 percent. This standard is intended to limit the frequency and severity of visibility impairment due to regional haze and is equivalent to a 10-mile nominal visual range.

d. Health Effects of Exposure to Criteria Air Pollutants

Ozone

Ozone is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving *reactive organic gases* (ROGs, also sometimes referred to as *volatile organic compounds* [VOCs] by some regulatory agencies) and *oxides of nitrogen* (NO_X) in the presence of sunlight. The main sources of ROG and NO_X, often referred to as *ozone precursors*, are combustion processes (including motor vehicle engines) and the evaporation of solvents, paints, and fuels. In the Bay Area, automobiles are the single largest source of ozone precursors. Ozone is referred to as a regional air pollutant because its precursors are transported and diffused by wind concurrently with ozone production through the photochemical reaction process. Ozone causes eye irritation, airway constriction, and shortness of breath and can aggravate existing respiratory diseases, such as asthma, bronchitis, and emphysema (CARB 2023c).

As shown in **Table 4.9-1**, the most stringent applicable standards (the state 1-hour standard of 0.09 parts per million [ppm] and the federal 8-hour standard of 0.07 ppm) were exceeded one time each in San Francisco in 2019. At Redwood City, both standards were exceeded two times each in 2017, the federal 8-hour standard was exceeded two times in 2019, and both standards were exceeded one time each in 2020.

Carbon Monoxide

CO is an odorless, colorless gas usually formed as a result of the incomplete combustion of fuels. The single largest source of CO is motor vehicles; the highest emissions occur during low travel speeds, stop-and-go driving, cold starts, and hard acceleration. Exposure to high concentrations of CO reduces the oxygen-carrying capacity of the blood and can cause headaches, nausea, dizziness, and fatigue; impair central nervous system function; and induce angina (chest pain) in persons with serious heart disease. Very high levels of CO can be fatal. **Table 4.9-1** shows that the more stringent state CO standards were not exceeded between 2018 and 2022 at either air monitoring site.

Particulate Matter

Particulate matter is a class of air pollutants that consists of heterogeneous solid and liquid airborne particles from man-made and natural sources. Particulate matter regulated by the state and federal Clean Air Acts is measured in two size ranges: PM_{10} for particles 10 microns in diameter or less, and $PM_{2.5}$ for particles 2.5 microns in diameter or less. Ultrafine particles are particles that are 0.1 micron or less in diameter. Ultrafine particles are associated with death from heart disease caused by blocked arteries. Ultrafine particles are therefore accounted for in the PM_{10} and $PM_{2.5}$ monitoring. In the Bay Area, motor vehicles generate about one-half of the

air basin's particulates, through tailpipe emissions as well as brake pad and tire wear. Wood burning in fireplaces and stoves, industrial facilities, and ground-disturbing activities such as construction are other sources of fine particulates. These fine particulates are small enough to be inhaled into the deepest parts of the human lung and can cause adverse health effects. According to CARB, studies in the United States and elsewhere "have demonstrated a strong link between elevated particulate levels and premature deaths, hospital admissions, emergency room visits, and asthma attacks," and studies of children's health in California have demonstrated that particle pollution "may significantly reduce lung function growth in children" (CARB 2023d).

CARB also reports that state-wide attainment of particulate matter standards could prevent thousands of premature deaths, lower hospital admissions for cardiovascular and respiratory disease and asthma-related emergency room visits, and avoid hundreds of thousands of episodes of respiratory illness in California. Among the criteria air pollutants that are regulated, particulates appear to represent a serious ongoing health hazard. In 1999, the BAAQMD reported in its CEQA Air Quality Guidelines that studies had shown that elevated particulate levels contribute to the death of approximately 200 to 500 people per year in the Bay Area. High levels of particulate matter can exacerbate chronic respiratory ailments, such as bronchitis and asthma, and have been associated with increased emergency room visits and hospital admissions.

$PM_{2.5}$ is of particular concern because epidemiologic studies have demonstrated that people who live near freeways and high-traffic roadways have poorer health outcomes, including increased asthma symptoms and respiratory infections, and decreased pulmonary function and lung development in children (SFDPH 2008). New studies are also showing that long-term average exposure to $PM_{2.5}$ is associated with an increased risk of death from the novel coronavirus 2019 disease (COVID-19) in the United States. One study found that an increase of 1 microgram per cubic meter ($\mu g/m^3$) in $PM_{2.5}$ is associated with an 8 percent increase in the COVID-19 death rate (Wu et al. 2020). The increase in wildfire smoke also could have contributed to increased cases of COVID-19 (Zhou et al. 2021). Note that these studies all demonstrate a correlational relationship between exposure to $PM_{2.5}$ and increases in the COVID-19 death rate, not a causal relationship.

Table 4.9-1 shows that the state 24-hour PM_{10} standard of 50 micrograms per cubic meter ($\mu g/m^3$) was exceeded on two days in 2020 in San Francisco. The federal 24-hour $PM_{2.5}$ standard was exceeded on 14 days in 2018, and 8 days in 2020. The state annual average standard was not exceeded between 2017 and 2021. PM_{10} is not monitored at the Redwood City air monitoring station. The federal 24-hour $PM_{2.5}$ standard was exceeded on 13 days in 2018 and 9 days in 2020 in Redwood City.

Nitrogen Dioxide

NO_2 is a reddish-brown gas that is a byproduct of combustion processes. Automobiles and industrial operations are the main sources of NO_2. Aside from its contribution to ozone formation, NO_2 can increase the risk of acute and chronic respiratory disease and reduce visibility. NO_2 may be visible as a coloring component on high pollution days, especially in conjunction with high ozone levels. In 2010, the USEPA implemented a new 1-hour NO_2 standard, which is presented in **Table 4.9-5**. On November 15, 2012, CARB approved a revision to the SIP for implementing the 2010 federal NO_2 standards. All areas in California are designated as in attainment/unclassified for the federal NO_2 standards (CARB 2012). The new federal standard was not exceeded at the San Francisco station nor at the Redwood City station between 2018 and 2022 (see **Table 4.9-1**).

The USEPA also has established requirements for a new monitoring network to measure NO_2 concentrations near major roadways in urban areas with a population of 500,000 or more. Sixteen new near-roadway monitoring sites are required in California, three of which are in the Bay Area. These monitors are located in Berkeley, Oakland, and San Jose. The new monitoring data has not resulted in a need to change area attainment designations (BAAQMD 2014).

Sulfur Dioxide

SO_2 is a colorless acidic gas with a strong odor. It is produced by the combustion of sulfur-containing fuels such as oil, coal, and diesel. SO_2 has the potential to damage materials and can cause health effects at high concentrations. It can irritate lung tissue and increase the risk of acute and chronic respiratory disease (BAAQMD 2017: B-2, C-16). SO_2 monitoring was terminated at the San Francisco station in 2009 because the state standard for SO_2 is being met in the Bay Area, and pollutant trends suggest that the air basin will continue to meet this standard for the foreseeable future.

In 2010, the USEPA implemented a new 1-hour SO_2 standard presented in **Table 4.9-5**. The USEPA has initially designated the air basin as an attainment area for SO_2. Similar to the new federal standard for NO_2, the USEPA has established requirements for a new monitoring network to measure SO_2 concentrations (USEPA 2016a). No additional SO_2 monitors are required for the Bay Area because the air basin has never been designated as non-attainment for SO_2 and no State Implementation Plan or maintenance plans have been prepared for SO_2 (BAAQMD 2012).

Lead

Leaded gasoline (phased out in the United States beginning in 1973), paint (on older houses and cars), smelters (metal refineries), and manufacture of lead storage batteries have been the primary sources of lead released into the atmosphere. Lead has a range of adverse neurotoxic health effects, which put children at special risk. Some lead-containing chemicals cause cancer

in animals. Lead levels in the air have decreased substantially since leaded gasoline was eliminated. Ambient lead concentrations are only monitored on an as-warranted, site-specific basis in California. On October 15, 2008, the USEPA strengthened the national ambient air quality standard for lead by lowering it from 1.5 $\mu g/m^3$ to 0.15 $\mu g/m^3$. The USEPA revised the monitoring requirements for lead in December 2010. These requirements focus on airports and large urban areas resulting in an increase in 76 monitors nationally (USEPA 2016a). The USEPA operates a lead monitoring station at the Reid-Hillview Airport (San Jose). Non-airport lead monitoring locations in the Bay Area are in San Jose (Jackson Street) and San Francisco (Arkansas Street) (USEPA 2023).

e. Air Quality Index

The USEPA developed the Air Quality Index scale to make the public health impacts of air pollution concentrations easily understandable. The index, much like an air quality "thermometer," translates daily air pollution concentrations into a number on a scale between 0 and 500. The numbers in the scale are divided into six color-coded ranges, with numbers 0 through 500 as outlined below:

- **Green (0–50)** indicates "good" air quality. No health impacts are expected when air quality is in the green range.
- **Yellow (51–100)** indicates air quality is "moderate." Unusually sensitive people should consider limiting prolonged outdoor exertion.
- **Orange (101–150)** indicates air quality is "unhealthy for sensitive groups." Active children and adults, and people with respiratory disease, such as asthma, should limit outdoor exertion.
- **Red (151–200)** indicates air quality is "unhealthy." Active children and adults, and people with respiratory disease, such as asthma, should avoid prolonged outdoor exertion; everyone else, especially children, should limit prolonged outdoor exertion.
- **Purple (201–300)** indicates air quality is "very unhealthy." Active children and adults, and people with respiratory disease, such as asthma, should avoid prolonged outdoor exertion; everyone else, especially children, should limit outdoor exertion.
- **Maroon (301–500)** indicates air quality is "hazardous." This would trigger health warnings of emergency conditions, and the entire population is more likely to be affected.

The Air Quality Index numbers refer to specific amounts of pollution in the air. They are based on the federal air quality standards for ozone, CO, NO_2, SO_2, PM_{10}, and $PM_{2.5}$. In most cases, the federal standard for these air pollutants corresponds to the number 100 on the index chart. Thus, if the concentration of any of these pollutants rises above its respective standard, the air quality can be unhealthy for the public. In determining the air quality forecast, local air districts

use the anticipated concentration measurements for each of the major pollutants, convert them into index numbers, and determine the highest index for each zone in a district.

Readings below 100 on the Air Quality Index scale would not typically affect the health of the general public (although readings in the moderate range of 51 to 100 may affect unusually sensitive people). Levels above 200 have only occurred six times in the Bay Area in the past five years, in November 2018 and August/September 2020, due to wildfires north of San Francisco and the complex wildfires that occurred throughout the Bay Area (BAAQMD 2025). Wildfires appear to be occurring with increasing frequency in California and the Bay Area as the climate changes (since 2000, 18 of the state's 20 largest wildfires and 18 of the state's 20 most destructive fires on record have occurred) (CAL FIRE 2021a, 2021b). As a result, the Air Quality Index in several neighboring counties reached the "very unhealthy" and "hazardous" designations, ranging from values of 201 to above 350. During those periods, the BAAQMD issued "Spare the Air" alerts and recommended that individuals stay inside with windows closed and refrain from significant outdoor activity.

Air Quality Index statistics over recent years indicate that air quality in the Bay Area is predominantly in the "Good" or "Moderate" categories and healthy on most days for most people. As shown in **Table 4.9-3**, the air basin had a total of 101 days with levels in the "unhealthy for sensitive groups" to "very unhealthy ranges," between 2019 and 2023. A number of these days are attributable to the increasing frequency of wildfires.

Table 4.9-3: Air Quality Index Statistics for the Air Basin

AQI Statistics for Air Basin	Number of Days by Year				
	2019	2020	2021	2022	2023
Unhealthy for Sensitive Groups (Orange) AQI: 101–150	10	34	9	8	7
Unhealthy (Red) AQI: 151–200	0	17	1	0	0
Very Unhealthy (Purple) AQI: 201–300	0	1	0	0	0

SOURCE: Bay Area Air Quality Management District, 2025.

f. Sensitive Receptors

Air quality does not affect every individual in the same way, and some groups are more sensitive to adverse health effects than others. More sensitive population groups include: the elderly and the young; those with higher rates of respiratory disease, such as asthma and chronic obstructive pulmonary disease; and those with other environmental or occupational health exposures (e.g., indoor air quality) that affect cardiovascular or respiratory diseases. The BAAQMD defines sensitive receptors as individuals more susceptible to poor air quality such as children and those with preexisting serious health problems affected by air quality occupying or residing in residential dwellings, schools, childcare centers, hospitals, and senior-care facilities. Workers are generally not considered sensitive receptors because all employers must follow regulations set forth by the Occupation Safety and Health Administration to ensure the health

and well-being of their employees (BAAQMD 2022a). However, the BAAQMD advises that lead agencies consider worker receptors in their health risk assessments to align with the BAAQMD's permitting requirements.

The proximity of sensitive receptors to motor vehicles is an air pollution concern, especially in urban areas where building setbacks are limited, and roadway volumes are higher than suburban locations of the Bay Area. Existing sensitive receptors evaluated for the Baylands include a representative sample of known residents (child and adult) in the surrounding area, and other sensitive receptors (school children, childcare facilities, etc.) located in the surrounding community and along the expected travel routes of the on-road delivery and haul trucks within the Specific Plan vicinity.

The health risk impact analysis for the Baylands also includes sensitive receptors located within a distance of 1,000 feet of the Specific Plan area, consistent with the BAAQMD Modeling Guidance (BAAQMD 2022a) to ensure the maximum health risk impact was captured by the analysis. There are numerous residential receptors located within 1,000 feet of the Baylands. However, the closest eight schools and seven childcare facilities are located beyond the 1,000-foot boundary of the Baylands. See **Figure 4.9-1** for the location of non-residential sensitive receptors. These locations are considered representative of other sensitive receptors in their vicinity. Although CARB includes playgrounds and medical facilities as sensitive receptors, because it focuses on TACs with long-term effects, it does not address locations where sensitive receptors would be present only for a short period of time.

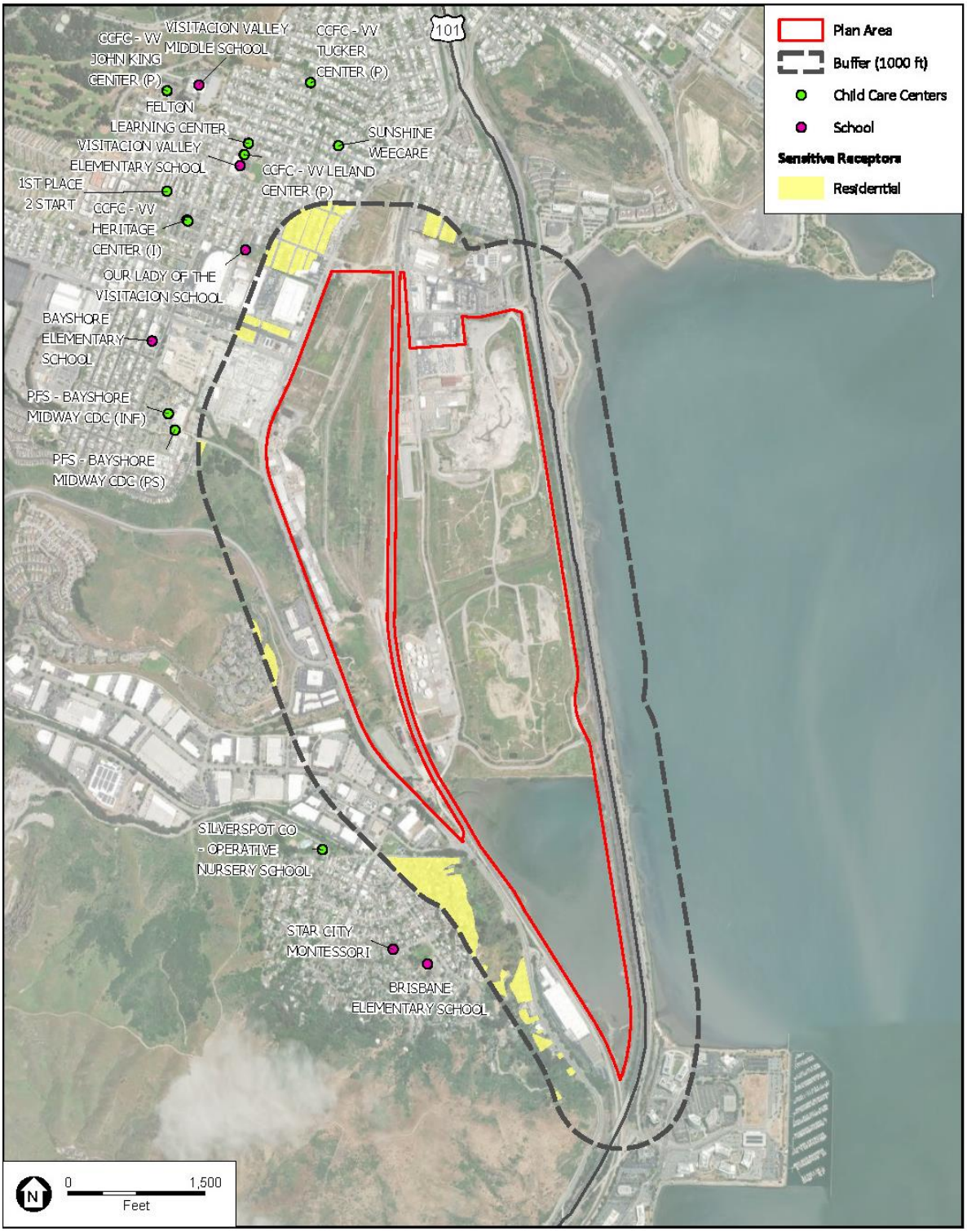
g. Existing Stationary Sources of Air Pollutant Emissions

The BAAQMD's inventory of permitted stationary sources of emissions shows 20 permitted stationary emission facilities present inside of or within 1,000 feet of the Specific Plan area. The majority of these permitted facilities include stationary diesel engines for power generators, fuel stations, and automotive repair, including auto body shops. In addition, these sources are present within and adjacent to the Baylands: Brisbane Recycling, Recology Sunset Scavenger, Brisbane Landfill, Kinder Morgan Brisbane Tank Farm.

h. Existing Mobile Sources of Air Pollutant Emissions

US 101, Bayshore Boulevard, Geneva Avenue, and Tunnel Avenue are the freeways and arterial roadways within 3,280 feet (1,000 meters) of the Specific Plan area that carry the highest volumes of traffic. This traffic contributes to concentrations of $PM_{2.5}$, DPM, and other air contaminants emitted from motor vehicles near the roadway level. The Caltrain rail line is the other "non-permitted" mobile source of air pollution bisecting the Specific Plan area. Caltrain locomotive engines are in the process of being converted to electric; however, diesel-powered freight trains may continue to use this rail line.

Figure 4.9-1: Existing Non-Residential Sensitive Receptor Locations



SOURCES: Microsoft, 2021; ESA, 2024

i. Toxic Air Contaminants

Individual projects may emit toxic air contaminants (TACs), which are a diverse group of air pollutants that may cause chronic (i.e., of long duration) and acute (i.e., severe but short-term) adverse effects on human health, including carcinogenic effects. Human health effects of TACs include birth defects, neurological damage, cancer, and death. There are hundreds of different types of TACs with varying degrees of toxicity. Thus, individual TACs vary greatly in the health risk they present; at a given level of exposure, one TAC may pose a hazard that is many times greater than another.

Unlike criteria air pollutants, TACs are not subject to ambient air quality standards but are regulated by the air district using a risk-based approach based on a health risk assessment to determine which sources and which pollutants to control as well as the degree of control. A health risk assessment is an analysis that estimates human health exposure to toxic substances, and when considered together with information regarding the toxic potency of the substances, a provides quantitative estimates of health risks.[184]

Exposure assessment guidance published by the BAAQMD in January 2016 adopts the assumption that residences would be exposed to air pollution 24 hours per day, 350 days per year, for 30 years (BAAQMD 2016). Therefore, assessments of air pollutant exposure to residents typically result in the greatest adverse health outcomes of all population groups.

Exposures to fine particulate matter ($PM_{2.5}$) are strongly associated with mortality, respiratory diseases, and poor lung development in children, and other health effects, such as hospitalization for cardiopulmonary disease (SFDPH 2008). Therefore, it is included in this discussion and analyzed in the health risk assessment as a pollutant that poses a risk to human health. Diesel particulate matter (DPM), a byproduct of diesel fuel combustion, is also of concern. CARB identified DPM as a TAC in 1998, primarily based on evidence demonstrating cancer effects in humans (CARB 1998). The estimated cancer risk from exposure to diesel exhaust is much higher than the risk associated with any other TAC routinely measured in the region. Based on guidance from the Office of Environmental Health Hazard Assessment (OEHHA), PM_{10} is used as the surrogate for whole diesel exhaust, or DPM (OEHHA 2015).

Both the air district and CARB operate TAC monitoring networks in the air basin. These stations measure 10 to 15 TACs, depending on the specific station. The TACs selected for monitoring are those that traditionally have been found in the highest concentrations in ambient air and therefore tend to produce the most significant risk. The nearest air district ambient TAC monitoring station to the proposed Specific Plan area is the station at 10 Arkansas

[184] In general, a health risk assessment is required if the air district concludes that projected emissions of a specific air toxic compound from a proposed new or modified source suggest a potential public health risk. The applicant is then subject to a health risk assessment for the source in question. Such an assessment generally evaluates chronic, long-term effects, estimating the increased risk of cancer as a result of exposure to one or more TAC's.

Street in San Francisco, with the most recent year of available data being 2022. The ambient concentrations of carcinogenic TACs measured at the Arkansas Street station, approximately 4 miles north of the Baylands, are presented in **Table 4.9-4**. The estimated cancer risk from a lifetime exposure (70 years) to these substances is also reported in the table. When TAC measurements at this station are compared to ambient concentrations of various TACs for the Bay Area as a whole, the cancer risks associated with mean TAC concentrations in San Francisco are similar to those for the Bay Area as a whole. Therefore, the estimated average lifetime cancer risk resulting from exposure to TAC concentrations monitored at the San Francisco station do not appear to be any greater than for the Bay Area as a region.

Table 4.9-4: Annual Average Ambient Concentrations of Carcinogenic Toxic Air Contaminants Measured in 2022 at Air District Monitoring Station at 10 Arkansas Street, San Francisco

Substance	Concentration (ppb)	Cancer Risk Probability per Million
Gaseous TACs		
Acetaldehyde	0.38	6
Benzene	0.10	26
1,3-Butadiene	0.022	24
Carbon Tetrachloride	0.062	48
Formaldehyde	1.15	24
Perchloroethylene	0.008	0.9
Methylene Chloride	0.071	0.7
Chloroform	0.014	1
Trichloroethylene	0.01	0.3
Chromium (Hexavalent) (ng/m^3)	0.083	18
Total Risk		***148.9***
Particulate TACs		
Annual Average, Fine particulate matter, $PM_{2.5}$ ($\mu g/m^3$)	6.8	— [b]
Annual Average, Inhalable particulate matter, PM_{10} ($\mu g/m^3$) [a]	7.7	— [b]

SOURCE: California Air Resources Board, *Ambient Air Toxics Summary*, 2-22, http://www.arb.ca.gov/adam/toxics/sitesubstance.html, and Top 4 Summary for the San Francisco – Arkansas Street monitoring site, accessed July 2024

ABBREVIATIONS: TAC's = toxic air contaminants; ppb = part per billion; ng/m^3 = nanograms per cubic meter.

NOTES:

a. PM_{10} is used as a surrogate for DPM.
b. These pollutants are monitored separately from the gaseous TACs and chromium (hexavalent); no cancer risk data are measured for them, as $PM_{2.5}$ is not a carcinogen and PM_{10} monitored data include sources other than just DPM.

Roadway-Related Toxic Air Contaminants

Motor vehicles are responsible for a large share of air pollution, especially in California. Vehicle tailpipe emissions contain diverse forms of particles and gases, and vehicles also contribute to particulates by generating road dust and tire wear. Epidemiologic studies have demonstrated that people living close to freeways or busy roadways have poorer health outcomes, including

increased asthma symptoms and respiratory infections, and decreased pulmonary function and poor lung development in children. Air pollution monitoring conducted in conjunction with epidemiologic studies has confirmed that roadway-related health effects vary with modeled exposure to PM and NO_2. In traffic-related studies, the additional non-cancer health risk attributable to roadway proximity was seen within 1,000 feet of the roadway and was strongest within 300 feet (CARB 2005). As a result, CARB recommends that new sensitive land uses not be located within 500 feet of a freeway or urban roads carrying 100,000 vehicles per day.

Existing Stationary Sources of TACs

The air district's inventory of permitted stationary sources of emissions shows 20 permitted stationary emission facilities present within or near 1,000 feet of the Baylands. The majority of these permitted facilities include stationary diesel engines for power generators, fuel stations, and automotive repair, including auto body shops, but these also include the Recology facility and the Kinder Morgan terminal, which lies within the Baylands. See **Figure 4.9-2** for locations of existing TAC sources in the area. Those sources now located on Industrial Way would be demolished once construction of the proposed project begins.

Existing Mobile Sources of TACs

US 101, Bayshore Boulevard, Geneva Avenue, and Tunnel Avenue are the freeways and arterial roadways within 1,000 feet of the Baylands that carry the highest volumes of traffic. This traffic contributes to concentrations of $PM_{2.5}$, DPM, and other TACs emitted from motor vehicles near the street level. The Caltrain rail line is a "non-permitted" mobile source of air pollution bisecting the Specific Plan area. Existing Caltrain diesel engines have been replaced with electric locomotives; however, diesel-powered freight may continue to use this rail line.

j. Odors

The ability to detect odors varies considerably among the population and can be subjective. People may have different reactions to the same odor. For example, an odor such as coffee roasting may be offensive to one person but perfectly acceptable to another. Reactions to odors can range from psychological to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache). An unfamiliar odor is also more easily detected and is more likely to cause complaints than a familiar one.

Sources that may generate odors include wastewater treatment and pumping facilities; landfills, transfer stations, and composting facilities; petroleum refineries, asphalt batch plants, chemical (including fiberglass) manufacturing, and metal smelters; painting and coating operations; rendering plants; coffee roasters and food processing facilities; and animal feed lots and dairies.

Figure 4.9-2: Existing Sources of Toxic Air Contaminants

SOURCES: ESRI, 2022; ESA, 2024

Current potential sources of odorous emissions at or near the Baylands include Recology waste management facilities and the Kinder Morgan Tank Farm. However, the BAAQMD has not received any odor complaints from these facilities, or for the former landfill since 2022.

4.9.3 REGULATORY CONTEXT FOR BAYLANDS DEVELOPMENT

a. Federal Laws, Plans, Programs, and Regulations

Clean Air Act

The 1970 Clean Air Act (most recently amended in 1990) requires that regional planning and air pollution control agencies prepare a regional air quality plan to outline the measures by which both stationary and mobile sources of pollutants would be controlled in order to achieve all standards by the deadlines specified in the act.

These ambient air quality standards are intended to protect the public health and welfare, and they specify the concentration of pollutants (with an adequate margin of safety) to which the public can be exposed without adverse health effects. They are designed to protect those segments of the public most susceptible to respiratory distress, including asthmatics, the very young, the elderly, people weakened from other illness or disease, or persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollution levels that are somewhat above ambient air quality standards before adverse health effects are observed.

The Clean Air Act establishes two types of national air quality standards. Primary standards set limits to protect public health, including the health of "sensitive" populations. Secondary standards set limits to protect public welfare, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings.

The current attainment status for the air basin, with respect to federal standards, is summarized in **Table 4.9-5**. In general, the basin experiences low concentrations of most pollutants when compared to federal standards, except for ozone and PM (PM_{10} and $PM_{2.5}$), for which standards are exceeded periodically (see **Table 4.9-5**).

The air basin is in attainment for other criteria air pollutants, with the exception of the 24-hour standards for PM_{10} and $PM_{2.5}$, for which the Bay Area is designated as "Unclassified" and in non-attainment, respectively. "Unclassified" is defined by the Clean Air Act as any area that cannot be classified, on the basis of available information, as meeting or not meeting the national primary or secondary ambient air quality standard for the pollutant. The air basin is designated as an attainment area with respect to the federal annual average $PM_{2.5}$ standard.

Table 4.9-5: Federal and State Ambient Air Quality Standards for Criteria Pollutants

Pollutant	Averaging Time	State Standard	National Standard	Pollutant Health and Atmospheric Effects	Major Pollutant Sources
Ozone (O_3)	1 hour	0.09 ppm	—	High concentrations can directly affect lungs, causing irritation. Long-term exposure may cause damage to lung tissue.	Formed when ROG and NO_X react in sunlight. Major sources include on-road motor vehicles, solvent evaporation, and commercial/ industrial equipment.
	8 hours	0.070 ppm	0.075 ppm		
Carbon Monoxide (CO)	1 hour	20 ppm	35 ppm	Classified as a chemical asphyxiant, CO interferes with transfer of fresh oxygen to the blood and deprives sensitive tissues of oxygen.	Internal combustion engines, primarily gasoline-powered motor vehicles.
	8 hours	9.0 ppm	9 ppm		
Nitrogen Dioxide (NO_2)	1 hour	0.18 ppm	0.100 ppm	Irritating to eyes and respiratory tract. Colors atmosphere reddish-brown.	Motor vehicles, petroleum refining operations, industrial sources, aircraft, ships, and railroads.
	annual arithmetic mean	0.030 ppm	0.053 ppm		
Sulfur Dioxide (SO_2)	1 hour	0.25 ppm	75 ppb	Irritates upper respiratory tract; injurious to lung tissue. Destructive to marble, iron, and steel. Limits visibility and reduces sunlight.	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.
	3 hours	—	0.5 ppm		
	24 hours	0.04 ppm	0.14 ppm		
	annual arithmetic mean	—	0.030 ppm		
Respirable Particulate Matter (PM_{10})	24 hours	50 µg/m^3	150 µg/m^3	May irritate eyes and respiratory tract, and cause decreases in lung capacity, cancer, and increased mortality. Produces haze and limits visibility.	Dust-producing industrial and agricultural operations, combustion, atmospheric photochemical reactions, natural sources (e.g., wind-raised dust).
	annual arithmetic mean	20 µg/m^3	—		
Fine Particulate Matter ($PM_{2.5}$)	24 hours	—	35 µg/m^3	Increases respiratory disease, lung damage, cancer, and premature death. Reduces visibility and results in surface soiling.	Fuel combustion in motor vehicles, equipment, and industrial sources; residential and agricultural burning; formed from photochemical reactions of other pollutants (NO_X, sulfur oxides, and organics).
	annual arithmetic mean	12 µg/m^3	12.0 µg/m^3		
Lead	30-day average	1.5 µg/m^3	—	Disturbs gastrointestinal system, and causes anemia, kidney disease, and neuromuscular and neurological dysfunction (in severe cases).	Present source: lead smelters, battery manufacturing and recycling facilities. Past source: combustion of leaded gasoline.
	calendar quarter	—	1.5 µg/m^3		
	rolling 3-month average	—	0.15 µg/m^3		
Hydrogen Sulfide	1 hour	0.03 ppm	No national standard	Can cause nuisance odor (rotten egg smell), headache, and breathing difficulties (higher concentrations).	Geothermal power plants, petroleum production and refining.

Pollutant	Averaging Time	State Standard	National Standard	Pollutant Health and Atmospheric Effects	Major Pollutant Sources
Sulfates (SO_4)	24 hour	25 µg/m^3	No national standard	Decreases ventilatory functions; aggravates asthma symptoms and cardio-pulmonary disease; causes vegetation damage; degrades visibility; causes property damage.	Industrial processes.
Visibility-Reducing Particles	8 hour	Reduces visibility to 10 miles or less	No national standard	Reduces visibility, reduces airport safety, lowers real estate value, and discourages tourism.	See $PM_{2.5}$.
Vinyl Chloride	24 hour	0.01 ppm	No national standard	Short-term exposure to high levels can cause dizziness, drowsiness, and headaches. Long-term oral exposure or inhalation can cause liver damage, including angiosarcoma, a rare form of liver cancer.	Polyvinyl chloride (PVC) plastic and vinyl products.

SOURCE: ESA, *Brisbane Baylands Air Quality Technical Report*, February 2025.

ABBREVIATIONS: ppm = parts per million; µg/m^3 = micrograms per cubic meter

The Clean Air Act also requires each state to prepare a State Implementation Plan. The Clean Air Act Amendments of 1990 added requirements for states with non-attainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. The State Implementation Plan is modified periodically to reflect current emissions inventories, planning documents, and rules and regulations of the air basins, as reported by their jurisdictional agencies. The USEPA is responsible for reviewing all State Implementation Plans to determine whether they conform to the mandates of the Clean Air Act, and to determine whether implementing the State Implementation Plans would achieve air quality goals. In addition, the USEPA sets federal vehicle and stationary source emissions standards and provides research and guidance in air pollution programs.

Vehicle Emissions Standards (Corporate Average Fuel Economy)

Established by the U.S. Congress in 1975, the Corporate Average Fuel Economy (CAFÉ) standards reduce energy consumption by increasing the fuel economy of cars and light trucks. The National Highway Traffic Safety Administration (NHTSA) and USEPA jointly administer the CAFÉ standards. Congress has specified that CAFÉ standards must be set at the "maximum feasible level" with consideration given to (1) technological feasibility; (2) economic practicality; (3) effect of other standards on fuel economy; and (4) the need for the nation to conserve energy.

The key federal vehicle efficiency regulations related to national fuel economy and GHG emissions are as follows:

- In 2010, NHTSA and USEPA finalized updated CAFE and GHG emissions standards for passenger cars and light trucks/light-duty vehicles for model years 2012 to 2016.
- In 2012, NHTSA and USEPA extended the CAFE and GHG emissions standards for light-duty vehicles for model years 2017 to 2025. Combined with the 2012 to 2016 standards, the aim is to achieve vehicles emitting 50 percent less than 2010 levels in 2025.
- In 2016, NHTSA and USEPA finalized national fuel economy and GHG emission standards for medium and heavy-duty vehicles that would cover model years 2018 to 2027 for certain trailers and model years 2021 to 2027 for semi-trucks, large pickup trucks, vans, and all types and sizes of buses and work trucks.
- In 2020, NHTSA and USEPA finalized updated CAFE and GHG emissions standards for passenger cars and light trucks and established new standards covering model years 2021 through 2026.
- In 2021, USEPA revised the GHG emissions standards for passenger cars and light trucks for model years 2023 through 2026, to leverage advances in clean car technology.

In 2022, NHSTA revised the CAFE standards for passenger cars and light trucks for model years 2024 to 2026, which are expected to result in average fuel economy label values of 49 miles per gallon.

Fuel-efficiency standards for medium- and heavy-duty trucks have been jointly developed by USEPA and NHTSA. The Phase 1 heavy-duty truck standards applied to combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles for model years 2014–2018, and required a reduction in fuel consumption by 6 to 23 percent over the 2010 baseline, depending on the vehicle type (USEPA 2011). USEPA and NHTSA have also adopted the Phase 2 heavy-duty truck standards, which cover model years 2021–2027 and require the phase-in of a 5 to 25 percent reduction in fuel consumption over the 2017 baseline, depending on the compliance year and vehicle type (USEPA 2016).

However, it is legally infeasible for individual municipalities to adopt more stringent fuel efficiency standards (see California Vehicle Efficiency Regulations, below). The Federal Clean Air Act (42 United States Code [USC] Section 7543[a]) states that "no state or any political subdivision thereof shall adopt or attempt to enforce any standard relating to the control of emissions from new motor vehicles or new motor vehicle engines subject to this part."

Clean Trucks Plan

On August 5, 2021, USEPA announced plans to reduce GHG emissions and other harmful air pollutants from heavy-duty trucks through a series of three rulemakings that would collectively

be called the Clean Trucks Plan. The first rulemaking, Control of Air Pollution from New Motor Vehicles: Heavy-Duty Engine and Vehicle Standards, was signed by USEPA on December 20, 2022 (EPA–HQ–OAR–2019–0055) and sets stronger emissions standards for heavy-duty vehicles and engines starting in model year 2027.

Under the Clean Trucks Plan, USEPA has proposed two additional rulemakings in 2023. One of the proposed rulemakings, Greenhouse Gas Emissions Standards for Heavy-Duty Vehicles, would revise its regulations to reduce GHG emissions for model year 2027 and later heavy-duty vehicles by improving fuel efficiency standards. This rulemaking would build on the success of previous rulemakings to reduce GHG emissions from model year 2014 and newer heavy-duty vehicles. The second proposed rulemaking would address multi-pollutant emissions, including GHG emissions and emissions that form smog and soot, for model year 2027 and later commercial pickup trucks and vans.

Construction Equipment Regulations

Construction equipment fuel efficiency requirements are generally referenced as "Tier 4" as regulated under 40 Code of Federal Regulations Parts 1039, 1065, and 1068, with similar provisions under the California Air Resources Board regulations such as Cal. Code Regs., tit. 13, §§ 1956.8, 2025. The CARB also regulates construction equipment emissions ensuring that they include "every feasible control measure" (Health & Safety Code, §§ 39602.5, 39667, 43013). "Every feasible measure" under the Clean Air Act (Health & Safety Code § 40612(c)(1)(A)) has been interpreted by CARB to be consistent with the definition of feasibility under CEQA Guidelines § 15364. Under California state law "Tier 4" is generally used interchangeably with "2010 model year engines or equivalent" (Cal. Code Regs., tit. 13, § 2025(d) (3)(F)).

b. State Laws, Plans, Programs, and Regulations

California Clean Air Act

Although the federal Clean Air Act established national ambient air quality standards, individual states retained the option to adopt more stringent standards and to include other pollution sources. California had already established its own air quality standards when federal standards were established, and because of the unique meteorological conditions in California, there is considerable diversity between the state and national ambient air quality standards, as shown in **Table 4.9-5**. California ambient standards are at least as protective as national ambient standards and are often more stringent.

In 1988, California passed the California Clean Air Act (California Health and Safety Code sections 39600 et seq.) to provide the state with a comprehensive framework for air quality planning regulation and to set state air quality standards. The California Clean Air Act, like its federal counterpart, requires the designation of areas as being either in attainment or

nonattainment. The California act requires designation of areas as in attainment or nonattainment to be based on state ambient air quality standards rather than the federal standards. The air basin is designated as in "nonattainment" for state ozone, PM_{10}, and $PM_{2.5}$ standards, and is designated as in "attainment" for the other pollutants.

The basic goal of the California Clean Air Act is to achieve health-based state ambient air quality standards by the earliest practicable date. The Act requires regions that violate the state ozone standard to prepare attainment plans to attain the standard. The BAAQMD is subject to California Clean Air Act requirements for "serious" areas [Secs. 40921.5(a)(2), 40919].

Regional air quality plans are required to achieve a reduction in district-wide emissions of 5 percent per year for ozone precursors (California Health & Safety Code Section 40914). However, if an air district is unable to achieve a 5 percent annual reduction, then the air district is required to adopt a control strategy to implement "all feasible measures" on an expeditious basis [Sec. 40914(b)(2)].

No non-attainment area in the state has been able to demonstrate a 5 percent reduction in ozone precursor pollutants each year. Consequently, air districts throughout the state, including the Bay Area, have opted to adopt "all feasible measures" as expeditiously as possible to meet the requirements of the Act.

State Implementation Plan

The 1977 Clean Air Act Amendments require that regional planning and air pollution control agencies prepare a regional Air Quality Plan to outline the measures by which both stationary and mobile sources of pollutants can be controlled to achieve all standards specified in the Clean Air Act. For areas that are designated "non-attainment" with respect to a standard, the Clean Air Act specifies future dates for achieving compliance with the NAAQS and mandates that states submit and implement a State Implementation Plan for local areas not meeting these standards. These plans must include pollution control measures that demonstrate how the standards will be met. Similarly, the 1988 California Clean Air Act also requires development of air quality plans and strategies to meet state air quality standards in areas designated as in non-attainment (except for areas designated as non-attainment for the state PM standards). Maintenance plans are required for attainment areas that had previously been designated in non-attainment to ensure continued attainment of the standards.

Toxic Air Contaminant Regulation

Toxic air contaminants (TACs) have been regulated under federal air quality law since the 1977 federal Clean Air Act Amendments. The most recent federal Clean Air Act Amendments (1990) reflect a technology-based approach for reducing TACs. The first phase involves requiring facilities to install Maximum Achievable Control Technology (MACT). The MACT standards vary depending on the type of emitting source. The USEPA has established MACT standards

for over 20 facilities or activities, such as perchloroethylene dry cleaning and petroleum refineries. The second phase of control involves determining the residual health risk represented by air toxics emissions sources after implementation of MACT standards.

Two principal laws provide the foundation for state regulation of TACs from stationary sources. In 1983, the state legislature adopted Assembly Bill 1807, which established a process for identifying TACs and provided the authority for developing retrofit air toxics control measures on a state-wide basis. Air toxics from stationary sources in California are also regulated under Assembly Bill 2588, the Air Toxics "Hot Spots" Information and Assessment Act of 1987. Regulation of TACs from mobile sources has traditionally been implemented through emissions standards for on-road motor vehicles (imposed on vehicle manufacturers) and through specifications for gasoline and diesel fuel sold in California (imposed on fuel refineries and retailers), rather than through land use decisions, air quality permits, or regulations addressing how motor vehicles are used by the general public.

In 2005, CARB approved a regulatory measure to reduce emissions of toxic and criteria air pollutants by limiting the idling of new heavy-duty diesel vehicles (Tit. 13, Cal. Code Regs. §§ 1956.8, 2485). The regulations generally limit idling of commercial motor vehicles (including buses and trucks) within 100 feet of a school or residential area for more than 5 consecutive minutes or periods aggregating more than 5 minutes in any 1 hour. Buses or vehicles also must turn off their engines upon stopping at a school and must not turn their engines on more than 30 seconds before beginning to depart from a school. Also, Senate Bill 352 was adopted in 2003 and limits locating public schools within 500 feet of a freeway or busy traffic corridor.

Diesel Particulate Matter

The exhaust from diesel engines includes hundreds of different gaseous and particulate components, many of which are toxic. Mobile sources such as trucks and buses are among the primary sources of diesel emissions, and concentrations of DPM are higher near heavily traveled highways. CARB estimated average Bay Area cancer risk from exposure to diesel particulate, based on a population-weighted average ambient diesel particulate concentration, at about 520 in 1 million as of the year 2012 (CARB 2023a), which is much higher than the risk associated with any other toxic air pollutant routinely measured in the region. Based on guidance from the Office of Environmental Health Hazard Assessment (OEHHA), PM_{10} is used as the surrogate for whole diesel exhaust, or DPM (OEHHA 2015).

Despite notable emission reductions, CARB recommends that proximity to sources of DPM emissions be considered in the siting of new sensitive land uses (or sensitive receptors).[185] CARB notes that these recommendations are advisory and should not be interpreted as defined

[185] BAAQMD CEQA Guidelines (2023) recommends the consideration of siting a new source near existing source of TACs if the project would include sources (e.g., generators or mobile sources) that would exacerbate the existing risk (Chapter 3.5).

"buffer zones," and that local agencies must balance other considerations, including transportation needs, the benefits of urban infill, community economic development priorities, and other quality of life issues. With careful evaluation of exposure, health risks, and affirmative steps to reduce risk where necessary, CARB's position is that infill development, mixed use, higher density, transit-oriented development, and other concepts that benefit regional air quality can be compatible with protecting the health of individuals at the neighborhood level (CARB 2005).

On-Road Diesel Trucks and Off-Road Diesel Equipment

To reduce emissions from non-road diesel equipment and other criteria pollutants, the USEPA established a series of increasingly strict emission standards for new off-road diesel engines (40 Code of Federal Regulations Parts 1039, 1065, and 1068; Cal. Code Regs., tit. 13, § 2025). CARB regulates construction equipment emissions ensuring that they include "every feasible control measure" (Health & Safety Code, §§ 39602.5, 39667, 43013). "Every feasible measure" under the Clean Air Act (Health & Safety Code § 40612(c)(1)(A)) has been interpreted by CARB to be consistent with the definition of feasibility under CEQA Guidelines § 15364.

Tier 1 standards were phased in on newly manufactured equipment from 1996 through 2000 (year of manufacture), depending on the engine horsepower category. Tier 2 standards were phased in on newly manufactured equipment from 2001 through 2006. Tier 3 standards were phased in on newly manufactured equipment from 2006 through 2008. Tier 4 standards, which require advanced emission control technology to attain them, were phased in between 2008 and 2015. Under California state law, "Tier 4" is generally used interchangeably with "2010 model year engines or equivalent" (Cal. Code Regs., tit. 13, § 2025(d) (3)(F)).

CARB also has adopted rules for new diesel trucks and for off-road diesel equipment. Along with rules adopted by the USEPA, these regulations have resulted in substantially more stringent emissions standards for new diesel trucks and new off-road diesel equipment, such as construction vehicles. Haul truck regulations also mandate fleet turnover to ensure that by January 1, 2023, nearly all on-road diesel trucks will have 2010 model year engines or equivalent [i.e., Tier 4] (Cal. Code Regs., tit. 13, § 1956.8).

CARB has also approved the Off-Road Diesel Regulation (13 Cal. Code Regs. § 2449), which imposes limits on idling; requires fleets to reduce their emissions by retiring, replacing, or repowering older engines, or installing Verified Diesel Emission Control Strategies (i.e., exhaust retrofits); requires the phase-out of the oldest and dirtiest engines starting on January 1, 2024; and requires procurement and use of renewable diesel (R99 or R100) starting January 1, 2024, with limited exceptions.

California Air Resources Board Advanced Clean Fleets Program

On April 28, 2023, CARB adopted the Advanced Clean Fleets rule (Title 13, California Code of Regulations §§ 2013 et seq.) which generally requires the shift to 100 percent zero-emissions trucking by 2035. This regulation is part of CARB's broader strategy to accelerate the transition to zero-emissions medium- and heavy-duty vehicles. It complements the Advanced Clean Trucks regulation, focusing on reducing emissions and promoting zero-emissions vehicle adoption. The Advanced Clean Fleets regulation covers various fleet types, including drayage operations, government-owned fleets, and high-priority fleets, mandating zero-emissions vehicle (ZEV) adoption in phases. Key provisions include manufacturer sales mandates, requirements for drayage fleets to transition to ZEVs, and specific ZEV targets for high-priority and government fleets. The regulation is expected to significantly reduce emissions, benefit public health, and contribute to achieving climate goals (CARB 2023).

To support the transition, CARB provides incentives, grants, and funding programs, with an emphasis on equity for disproportionately impacted communities. These programs aim to reduce the financial burden on fleet owners, promote early adoption, and expand charging and hydrogen fueling infrastructure. CARB estimates that the Advanced Clean Fleets regulation, in conjunction with the Advanced Clean Trucks regulation, will result in a substantial increase in ZEVs on California roads, contributing to emissions reduction and public health improvement. The regulation reflects California's commitment to achieving a fully zero-emissions fleet by 2045, with specific targets for various vehicle categories.

Automobile Fuel Efficiency Standards

The Corporate Average Fuel Economy Standards (CAFÉ) were first enacted in 1975 to improve the average fuel economy of cars and light duty trucks. The current CAFÉ standards for model years 2024–2026 require new passenger and light duty vehicles sold in the US to average at least 40 miles per gallon (mpg). This is a nearly 43 percent increase from the previous standard of approximately 28 mpg. Current proposals seek to increase this to 49 mpg after 2026. Furthermore, the rate of electric vehicle adoption rate is occurring faster than anticipated. California has reached 1.5 million electric vehicle sales 2 years ahead of its planned 2025 target for the sales milestone. At this time, approximately 25 percent of new car sales in California are electric vehicles.

Newest Vehicle Regulations in 2021 and 2022

Heavy Duty Inspection and Maintenance (2021)

Approved in December 2021 with implementation to start in January 2023, this regulation directed CARB to develop and implement a comprehensive heavy-duty vehicle inspection and maintenance (HD I/M) regulation to ensure that vehicles' emissions control systems are

properly functioning when traveling on California's roadways. The Board approved the regulation on December 9, 2021, with implementation to be phased in starting January 2023. Dubbed the "Clean Truck Check," the program combines periodic vehicle testing requirements with other emissions monitoring techniques and expanded enforcement strategies to identify vehicles in need of emissions related repairs and ensure any needed repairs are performed. When fully implemented, the program will provide significant reductions in smog-forming (NO_x) and carcinogenic toxic air pollution (DPM) necessary to achieve federal air quality mandates and healthy air in California's communities.

Advanced Clean Cars II (2022)

Advanced Clean Cars II combines several regulations into one package including the Low-Emission Vehicle (LEV) criteria and greenhouse gas regulations and the zero-emission vehicle (ZEV) regulation. Advanced Clean Cars I was adopted in 2012 and Advanced Clean Cars II was adopted in 2022. These regulations rapidly scale down emissions of light-duty passenger cars, pickup trucks and SUVs and require an increased number of ZEVs to meet air quality and climate change emissions goals. In October 2023, staff launched a new effort to consider potential amendments to the Advanced Clean Cars II regulations, including updates to the tailpipe greenhouse gas emission standard and limited revisions to the Low-Emission Vehicle and Zero-Emission Vehicle regulations.

Advanced Clean Fleets (2022)

The Advanced Clean Fleets (ACF) Regulation is the latest development in CARB's decades long history of setting increasingly stringent emission standards for mobile sources that are needed to protect the public health and welfare of Californians. The ACF Regulation requires fleets that are well suited for electrification to reduce emissions through requirements to both phase-in the use of ZEVs for targeted fleets and requirements that manufacturers only manufacture ZEV trucks starting in the 2036 model year.

Legislation

California Renewables Portfolio Standard

The Renewable Portfolio Standard Program, as updated in 2018 (SB 100), requires the State to procure 60 percent of its electricity from renewable sources by 2030 and that CARB should plan for 100 percent eligible renewable energy resources and carbon-free sources by 2045. SB 1020, signed on September 16, 2022, revises SB 100, and instead requires that renewable energy resources and zero-carbon resources supply 90 percent of all retail electricity sales to end-use customers by December 31, 2035, 95 percent by December 31, 2040, and 100 percent of by December 31, 2045, and supply 100 percent of electricity procured to serve all state agencies by December 31, 2035 (Pub. Utilities Code §§ 399.11, 399.30, and 454.33). Peninsula Clean Energy

(PCE) is the primary electricity provider for residences and businesses in Brisbane. PCE is known as a Community Choice Aggregator (CCA) that supplies electricity principally from wind, solar, and hydro resources, and offers up to 100 percent renewable electricity to residential and commercial customers.

Assembly Bill 341

AB 341, which became law in 2011, established a new state-wide goal of 75 percent recycling through source reduction, recycling, and composting by 2020. The new law changed the way that the state measures progress toward the 75 percent diversion goal, focusing on source reduction, recycling, and composting. AB 341 also requires all businesses and public entities that generate 4 cubic yards or more of waste per week and multifamily residential dwellings with five units or more to have a recycling program in place. The purpose of the law is to reduce GHG emissions by diverting commercial solid waste to recycling efforts and to expand the opportunity for additional recycling services and recycling manufacturing facilities in California.

Assembly Bill 1826

AB 1826, known as the Commercial Organic Waste Recycling Law, became effective on January 1, 2016. This law requires businesses and multifamily complexes (with five units or more) that generate specified amounts of organic waste (compost) to arrange for organics collection services. The law phased in the requirements for businesses, with full implementation realized in 2019:

- **First Tier:** Beginning in April 2016, the first tier of affected businesses was required to comply with AB 1826. This tier consisted of businesses generating 8 cubic yards or more of organic materials per week.
- **Second Tier:** In January 2017, affected businesses expanded to include those generating 4 cubic yards or more of organic materials per week.
- **Third Tier:** In January 2019, affected businesses expanded further to include those generating 4 cubic yards or more of commercial solid waste per week.

Vehicular Emissions Regulations and Requirements

Advanced Clean Cars Program

In January 2012, pursuant to Scoping Plan Recommended Measures T-1 and T-4, CARB approved the Advanced Clean Cars Program, a new emissions-control program for model years 2017 through 2025. In response to a midterm review of the standards in March 2017, CARB directed staff to begin working on post-2025-model-year vehicle regulations (Advanced Clean Cars II) to research additional measures to reduce air pollution from light-duty and medium-

duty vehicles. Additionally, as described previously, in September 2020, Governor Newsom signed EO N-79-20, which established a goal for 100 percent of new passenger cars and trucks sold in California by 2035 to be zero-emissions and directed CARB to develop and propose regulations toward this goal. The primary mechanism for achieving these targets for passenger cars and light trucks is the Advanced Clean Cars II Program. CARB adopted the Advanced Clean Cars II regulations on August 25, 2022.

Advanced Clean Trucks Program

On June 25, 2020, CARB adopted the Advanced Clean Trucks rule, which requires truck manufacturers to transition from diesel vehicles to electric zero-emissions vehicles beginning in 2024, with the goal of reaching 100 percent zero-emissions vehicles by 2045. The goal of this rule is to help California meet its climate targets of a 40 percent reduction in GHG emissions and a 50 percent reduction in petroleum use by 2030, along with an 80 percent reduction in GHG emissions by 2050. Zero-emissions vehicles are two to five times more energy efficient than diesel vehicles, and the Advanced Clean Trucks rule will reduce GHG emissions with the co-benefit of reducing dependence on petroleum fuels and reducing energy consumption.

Truck manufacturers will be required to sell zero-emissions vehicles as an increasing percentage of their annual sales from 2024 through 2035. Companies with large distribution fleets (50 or more trucks) will be required to report information about their existing fleet operations in an effort to identify future strategies for increasing zero-emissions fleets state-wide.

Zero-emissions vehicles are two to five times more energy efficient than diesel vehicles, and the Advanced Clean Trucks rule will reduce GHG emissions with the co-benefit of reducing dependence on petroleum fuels and reducing energy consumption. See also discussion of the Clean Trucks Program under Federal Regulations above.

Advanced Clean Fleets Program

In September 2023, the Office of Administrative Law approved CARB's Advanced Clean Fleets rule, which became state law on October 1, 2023 (Title 13, California Code of Regulations §§ 2013 et seq.). This program requires the shift to 100 percent zero-emissions trucking by 2035. This regulation is part of CARB's broader strategy to accelerate the transition to zero-emissions medium- and heavy-duty vehicles. It complements the Advanced Clean Trucks regulation, which covers various fleet types, including drayage operations, government-owned fleets, and high-priority fleets, mandating zero-emissions vehicle adoption in phases. Key provisions of the Advanced Clean Fleets rule include manufacturer sales mandates, requirements for drayage fleets to transition to zero-emissions vehicles, and specific zero-emissions vehicle targets for high-priority and government fleets. The Advanced Clean Fleets regulation requires that manufacturers sell only zero-emissions medium- and heavy-duty vehicles (ZEV) in California starting in 2036 and that high-priority fleets must purchase only zero-emissions vehicles beginning 2024 and, starting January 1, 2025, must remove internal combustion engine vehicles

at the end of their useful life, or that high-priority fleets must achieve 100 percent zero-emissions vehicles by 2042 (CARB 2023). The regulation is expected to significantly reduce emissions, benefit public health, and contribute to achieving climate goals.

To support this transition, CARB provides incentives, grants, and funding programs, with an emphasis on equity for disproportionately impacted communities. These programs aim to reduce the financial burden on fleet owners, promote early adoption, and expand charging and hydrogen fueling infrastructure.

Advanced Clean Cars Program

The Advanced Clean Cars emissions-control program, approved by CARB in 2012, is closely associated with the Pavley regulations (CARB 2017). The program requires a greater number of zero-emissions vehicle models for the years 2015 through 2025, to control smog, soot, and GHG emissions. This program includes the Low-Emissions Vehicle regulations to reduce emissions of criteria air pollutants and GHGs from light- and medium-duty vehicles; and the Zero-Emissions Vehicle regulations, which require manufacturers to produce an increasing number of pure zero-emissions vehicles (battery and fuel cell electric vehicles) and includes the provision to produce plug-in hybrid electric vehicles between 2018 and 2025. The increase in low- and zero-emissions vehicles will result in a decrease in the consumption of non-renewable fuels such as gasoline and diesel and a concomitant reduction in energy use.

The rate of electric vehicle adoption rate is occurring faster than what was anticipated in 2018. California has reached 1.5 million electric vehicle sales 2 years ahead of its planned 2025 target for the sales milestone (CEC 2023). In the second quarter of 2024, approximately 24.9 percent of new light-duty vehicle sales in California were electric.[186]

California Air Resources Board Mobile Source Strategy

In October 2021, CARB released the updated Mobile Source Strategy, which demonstrates the levels of cleaner technologies necessary to meet state goals for reducing criteria pollutant, GHG, and toxic air contaminant emissions from cars, trucks, tractors, and other on-road vehicles and off-road equipment which are major contributors to emissions of nitrogen oxides (NO_X), GHGs, and toxic air contaminants.

The key focus of the Mobile Source Strategy is on advancing the use of zero-emissions technologies. The Mobile Source Strategy also identifies increased accessibility to clean transportation as a critical strategy to meet air quality goals. Overall, the Mobile Source Strategy calls for 1.4 million medium- and heavy-duty ZEVs in California by 2045. State-wide implementation of the Mobile Source Strategy would reduce mobile-source fuel consumption

[186] https://www.energy.ca.gov/data-reports/energy-almanac/zero-emission-vehicle-and-infrastructure-statistics-collection/new-zev.

by 9.5 billion gallons of gasoline and 3.0 billion gallons of diesel equivalent in 2045, which equates to a GHG emissions reduction of approximately 94 million metric tons of carbon dioxide equivalent ($MMTCO_2e$) in 2045.

Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling

In 2004, CARB adopted the Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling to reduce public exposure to diesel particulate matter emissions (13 CCR Section 2485). The measure applies to diesel-fueled commercial vehicles with gross vehicle weight ratings greater than 10,000 pounds that are licensed to operate on highways, regardless of where they are registered. This measure prohibits diesel-fueled commercial vehicles from idling for more than 5 minutes at any given location. The primary goal of this measure is to reduce public health impacts from diesel emissions, compliance with which also reduces GHG emissions and energy consumption by reducing fuel consumption from unnecessary idling.

Airborne Toxic Control Measure for Stationary Compression Ignition Engines

In 2004, CARB adopted an airborne toxic control measure to reduce public exposure to emissions of diesel particulate matter and criteria pollutants from stationary diesel-fueled compression ignition engines (17 CCR Section 93115). The measure applies to all owners and operators of a stationary compression ignition engine in California with a rated brake horsepower greater than 50. The measure also applies to anyone who sells, offers for sale, leases, or purchases a stationary compression ignition engine. This measure outlines fuel and fuel additive requirements; emissions standards; recordkeeping, reporting, and monitoring requirements; and compliance schedules for compression ignition engines.

Truck and Bus Regulation

In addition to limiting exhaust from idling trucks, CARB approved the Truck and Bus Regulation in 2008 to reduce NO_X and particulate matter emissions from existing diesel vehicles operating in California (13 CCR Section 2025). The phased regulation aims to reduce emissions by requiring the installation of diesel soot filters and encouraging the retirement, replacement, or retrofitting of older engines with newer emission-controlled models. This regulation has been implemented in phases, with full implementation in 2023.

CARB also promulgated emissions standards for off-road diesel construction equipment of greater than 25 horsepower such as bulldozers, loaders, backhoes, and forklifts, as well as many other self-propelled off-road diesel vehicles. The In-Use Off-Road Diesel-Fueled Fleets regulation adopted by CARB on July 26, 2007, aims to reduce emissions by requiring the installation of diesel soot filters and encouraging the retirement, replacement, or repowering of older, dirtier engines with newer emissions-controlled models (13 CCR Section 2449). The compliance schedule requires full implementation by 2023 of all equipment for large and medium fleets and by 2028 for small fleets.

State of California Building Codes

Title 24 of the California Code of Regulations requires California homes and businesses to meet strong energy efficiency measures, thereby lowering their energy use. Title 24 contains numerous subparts, including Part 1 (Administrative Code), Part 2 (Building Code), Part 3 (Electrical Code), Part 4 (Mechanical Code), Part 5 (Plumbing Code), Part 6 (Energy Code), Part 8 (Historical Building Code), Part 9 (Fire Code), Part 10 (Existing Building Code), Part 11 (Green Building Standards Code), and Part 12 (Referenced Standards Code).

Starting in 1978, the California Building Standards Commission and the California Energy Commission adopted the California Energy Code. These energy efficiency standards are reviewed every few years by the Building Standards Commission and the California Energy Commission and revised if necessary (Pub. Res. Code § 25402(b)(1)). These regulations are carefully scrutinized and analyzed for technological and economic feasibility, and cost effectiveness (Pub. Res. Code § 25402(b) and (d)). The regulations are adopted with the goal of "[r]educing of wasteful, uneconomic, inefficient, or unnecessary consumption of energy" (Pub. Res. Code § 25402; *Building Code Action v. Energy Resources Conservation & Dev. Com.* (1979) 88 Cal.App.3d 913).

Energy Code (Part 6)

The CEC first adopted the Energy Efficiency Standards for Residential and Nonresidential Buildings (CCR Title 24, Part 6) in 1978 in response to a legislative mandate to reduce energy consumption in California. The standards were not originally intended to reduce GHG emissions, but increased energy efficiency and reduced consumption of electricity, natural gas, and other fuels would result in fewer GHG emissions from residential and nonresidential buildings subject to the standard. The standards are typically updated every 3 years to allow for the consideration and inclusion of new energy efficiency technologies and methods. The current Title 24, Part 6 standards (2022 standards) became effective on January 1, 2023.

The 2022 Energy Code provides crucial steps in the state's progress toward 100 percent clean electricity by midcentury and builds on California's technology innovations, encouraging energy-efficient approaches to encourage building decarbonization, particularly emphasizing heat pumps for space heating and water heating. The 2022 Energy Code also strengthens ventilation standards to improve indoor air quality and extends the benefits of photovoltaic and battery storage systems and other demand-flexible technology to work in combination with heat pumps to enable California buildings to be responsive to climate change.

More specifically, the 2022 Energy Code now requires "All single-family residential buildings shall have a newly installed photovoltaic (PV) system or newly installed PV modules meeting the minimum qualification requirements specified in Joint Appendix JA11" (Cal. Code Regs., tit. 24, Part 6, § 150.1(c)(14)). The California Energy Code was further updated in 2022 to require solar for multi-family buildings, and energy storage for structures greater than three habitable

stories (Cal. Code Regs., tit. 24, Part 6, § 170.2(f), (g), (h)). Similarly, solar photovoltaics and energy storage are now required for grocery stores, offices, financial institutions, unleased tenant space, retail, schools, warehouses, auditoriums, convention centers, hotels/motels, libraries, medical office buildings/clinics, restaurants, theaters, and mixed-use buildings where one or more of these building types constitute at least 80 percent of the floor area (Cal. Code Regs., tit. 24, Part 6, § 140.10(a)).

Buildings for which permit applications are submitted on or after January 1, 2023, must comply with the 2022 Energy Code. The Energy Code includes measures that will reduce energy use in single-family, multifamily, and nonresidential buildings. These measures will:

- Affect newly constructed buildings by adding new prescriptive and performance standards for electric heat pumps for space conditioning and water heating, as appropriate for the various climate zones in California.
- Require photovoltaic and battery storage systems for newly constructed multifamily and selected nonresidential buildings.
- Update efficiency measures for lighting, building envelope, and heating, ventilation, and air conditioning (HVAC) systems.
- Make improvements to reduce the energy loads of certain equipment subject to Energy Code requirements that perform a commercial process not related to the building occupant's needs (such as refrigeration equipment in refrigerated warehouses, or air conditioning for computer equipment in data processing centers).

California Green Buildings Standards Code (Part 11)

In 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (Part 11 of Title 24) is commonly referred to as CALGreen and establishes minimum mandatory standards as well as voluntary standards pertaining to the planning and design of sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and interior air quality. The CALGreen standards took effect in January 2011 and instituted mandatory minimum environmental performance standards for all ground-up, new construction of commercial, low-rise residential and state-owned buildings and schools and hospitals. The CALGreen 2022 standards became effective on January 1, 2023 (International Code Council [ICC] 2023). The nonresidential mandatory standards require the following measures that relate to utilities and service systems (24 CCR Part 11):

- Mandatory reduction in indoor water usage through installation of separate submeters or metering devices, and compliance with specified flow rates for plumbing fixtures and fittings and faucets and fountains.

- Mandatory reduction in outdoor water usage through compliance with a local water efficient landscaping ordinance or the California Department of Water Resources' Model Water Efficient Landscape Ordinance and installation for recycled water supply systems where available/applicable.
- 65 percent of construction and demolition waste must be diverted from landfills and 100 percent of trees, stumps, rocks, and associated vegetation and soils resulting primarily from land clearing shall be reused or recycled.
- Provide readily accessible areas for recycling that serve the entire building.
- Mandatory inspections of energy systems to ensure optimal working efficiency.
- Inclusion of electric vehicle charging stations or designated spaces capable of supporting future charging stations.

c. Regional Plans, Programs, and Regulations

Bay Area Air Quality Management District

The Bay Area Air Quality Management District is the regional agency responsible for air quality regulation within the San Francisco Bay Area Basin. The BAAQMD regulates air quality through its planning and review activities. The BAAQMD has permit authority over most types of stationary emission sources and can require stationary sources to obtain permits, and can impose emission limits, set fuel or material specifications, or establish operational limits to reduce air emissions. The BAAQMD regulates new or expanding stationary sources of toxic air contaminants.

BAAQMD CEQA Air Quality Guidelines

The 2022 BAAQMD CEQA Guidelines include recommended thresholds of significance to assist lead agencies in evaluating and mitigating air quality impacts under CEQA (BAAQMD 2022b). The BAAQMD's thresholds establish levels at which emissions of ozone precursors (ROG and NO_X), PM_{10}, $PM_{2.5}$, CO, TACs, and odors could cause significant air quality impacts.

The BAAQMD CEQA Guidelines provide project-level thresholds of significance for criteria air pollutants for which the air basin is in non-attainment. The criteria air pollutant NAAQS and CAAQS set by EPA and CARB, respectively, are intended to incorporate an adequate margin of safety to protect the public health and welfare. As described Section 3.7.1, Environmental Setting, the air basin is designated as in non-attainment for ozone, $PM_{2.5}$, and PM_{10}. By definition, regional air pollution is largely a cumulative impact in that no single project is sufficient in size to, by itself, result in non-attainment of air quality standards. Instead, a project's individual emissions are considered to contribute to the existing, cumulative air quality conditions. Regional air pollutants, such as ozone, PM_{10}, and $PM_{2.5}$, can be formed

and/or transported over long distances and affect ambient air quality far from the emissions source. The magnitude and location of specific health effects from exposure to increased ozone, PM_{10}, and $PM_{2.5}$ concentrations are the result of emissions generated by numerous sources throughout the air basin, as opposed to a single project. The BAAQMD project-level thresholds represent the levels above which a project's individual emissions would result in a cumulatively considerable contribution to the air basin's existing non-attainment conditions for criteria air pollutants.

2017 Clean Air Plan: Spare the Air – Cool the Climate

For state air quality planning purposes, the Bay Area Basin is classified as a serious non-attainment area for ozone. The "serious" classification triggers various plan submittal requirements and transportation performance standards. One such requirement is that the Bay Area Basin update the *Clean Air Plan* every 3 years to reflect progress in meeting the air quality standards and to incorporate new information regarding the feasibility of control measures and new emission inventory data. The Bay Area Basin's record of progress in implementing previous measures must also be reviewed. The BAAQMD Clean Air Plan, entitled, "Spare the Air – Cool the Climate," which is incorporated herein by reference, is available at https://www.baaqmd.gov/plans-and-climate/air-quality-plans/current-plans.

The 2017 Clean Air Plan updates the Bay Area's ozone plan, which is based on the "all feasible measures" approach to meet the requirements of the California Clean Air Act. The 2017 Clean Air Plan also lays the groundwork for reducing GHG emissions in the Bay Area to meet the state's 2030 and 2050 GHG reduction targets. The Plan also includes a vision for the Bay Area in a post-carbon year 2050 that encompasses the following:

- Construct buildings that are energy efficient and powered by renewable energy.
- Walk, bicycle, and use public transit for the majority of trips and use electric-powered autonomous public transit fleets.
- Incubate and produce clean energy technologies.
- Live a low-carbon lifestyle by purchasing low-carbon foods and goods in addition to recycling and putting organic waste to productive use.

The 2017 Plan focuses on two goals:

- Protect Air Quality and Health at the Regional and Local Scale:
    - Attain all state and national air quality standards.
    - Eliminate disparities among Bay Area communities in cancer health risk from toxic air contaminants.

- Protect the Climate:
    - Reduce Bay Area GHG emissions 40 percent below 1990 levels by 2030, and 80 percent below 1990 levels by 2050.

In pursuit of these goals, the 2017 Plan has several complementary objectives:

- Update the Bay Area ozone plan (i.e., the Bay Area 2010 Clean Air Plan) pursuant to the requirements of the California Health and Safety Code;
- Reduce population exposure to harmful air pollutants, especially in vulnerable communities and populations; and
- Protect the climate through a comprehensive regional climate protection strategy.

To comply with California Health and Safety Code ozone planning requirements, the 2017 Plan states that it includes "all feasible measures." It defines an integrated, multi-pollutant control strategy to reduce emissions of particulate matter, toxic air contaminants, ozone precursors and greenhouse gases. The control strategy describes specific actions to reduce emissions of air and climate pollutants from the full range of emission sources and is based on four key priorities:

- Reduce emissions of criteria air pollutants and toxic air contaminants from all key sources.
- Reduce emissions of super-GHG pollutants such as methane.
- Decrease demand for fossil fuels by:
    - Increasing efficiency of industrial processes, energy, buildings, and transportation sectors.
    - Reducing demand for vehicle travel, and high-carbon goods and services.
- Decarbonize the region's energy system by:
    - Making the electricity supply carbon-free.
    - Electrifying the transportation and building sectors.

The Clean Air Plan addresses four categories of pollutants: ground-level ozone and its key precursors, ROG and NO_X; PM, primarily $PM_{2.5}$, and precursors to secondary $PM_{2.5}$; air toxics; and GHG emissions. The control measures are categorized based on the economic sector framework including stationary sources, transportation, energy, buildings, agriculture, natural and working lands, waste management, and water measures.

The Clean Air Plan also includes cumulative emission trends, which generally explains that air quality has improved over the last several decades despite substantial increases in economic and population growth. The number of days per year when the region exceeds the state 1-hour ozone standard has been decreasing steadily over the past 30 years. However, the data show

large fluctuations in the number of exceedance days from year to year. For example, from 1996 to 1997 the number of exceedances dropped from 45 to 10, and then rose to 29 in 1998. Most of this short-term fluctuation from one year to the next is due to variation in weather patterns and wildfires. Averaging the data across several years reduces the weather-related short-term variation. The 3-year rolling average in Figure 2-11 of the Clean Air Plan shows a relatively steady downward trend in exceedances, from an average of 20 or more exceedance days in most years prior to 2000 to fewer than 10 days in the past decade.

The Bay Area has also achieved significant reductions in ambient concentrations of both $PM_{2.5}$ and PM_{10} in recent years through efforts to decrease emissions from key emissions sources, such as motor vehicles and wood burning. Figure 2-13 of the Clean Air Plan shows trends relative to the national and state PM standards. PM_{10} levels have been greatly reduced since 1990. Peak concentrations have declined by 60 percent, and annual average values have declined by 50 percent. $PM_{2.5}$ has only been measured since 1999, so long-term quantitative trend analysis is currently limited. However, concentrations of $PM_{2.5}$ have been reduced since 1999 in relation to both the annual standard and the 24-hour standard. Bay Area 24-hour $PM_{2.5}$ levels have been cut in half since 1999.

The Bay Area has also benefited from dramatic reductions in public exposure to toxic air contaminants. Based on ambient air quality monitoring, and using OEHHA cancer risk factors, the estimated lifetime cancer risk for Bay Area residents, over a 70-year lifespan from all TACs combined, declined from 4,100 cases per million in 1990 to 690 cases per million people in 2014, as shown in Figure 2-14 of the Clean Air Plan. This represents an 83 percent decrease between 1990 and 2014.

Future cumulative projections are described in Chapter 5 of the Clean Air Plan. In aggregate, the proposed control measures are expected to reduce emissions of ROG by 11 tons per day, NO_X by 9.3 tons per day, and $PM_{2.5}$ by 3.1 tons per day in 2030.

The estimated health benefits of the reductions in emissions of ozone precursors, particulate matter, and TACs from the proposed control strategy of the Clean Air Plan as a whole are shown below in the cases avoided (from Clean Air Plan Table 5-11):

- Premature mortality – 76 cases avoided;
- Non-fatal heart attacks – 44 cases avoided;
- Hospital admissions – 16 cases avoided;
- Asthma emergency room visits – 29 cases avoided;
- Chronic bronchitis – 47 cases avoided;
- Acute bronchitis – 249 cases avoided;
- Respiratory symptoms – 10,189 cases avoided;

- Lost workdays – 9,128 cases avoided; and
- Minor restricted activity days – 51,403 cases avoided.

The GHG reduction measures in the proposed control strategy are estimated to reduce approximately 4.4 $MMTCO_2e$ per year by 2030, based on 100-year Global Warming Potential (GWP) factors. The emissions reductions are estimated to be 5.6 MMT of CO_2e per year by 2030 if the emissions reductions are calculated based on 20-year GWP factors.

Control strategy actions relevant to development projects, such as the Baylands Specific Plan, are identified in **Table 4.9-6**.

Table 4.9-6: Relevant 2017 Clean Air Plan Air Quality Strategy Actions

Strategy No.	Name	Pollutant	Description
Stationary Source Control Measures			
SS 20	Air Toxics Risk Cap and Reduction from Existing Facilities	TAC	Reducing public exposure to toxic air contaminants (TACs) from existing facilities through Draft Rule 11-18.
SS 21	New Source Review for Toxics	TAC	Propose revisions to Air District Rule 2-5, New Source Review of Toxic Air Contaminants, based on OEHHA's 2015 Health Risk Assessment Guidelines and CARB/California Air Pollution Control Officers Association's 2015 Risk Management Guidance. Revise the Air District's health risk assessment trigger levels for each toxic air contaminant using the 2015 Guidelines and most recent health effects values.
SS 26	Surface Prep and Cleaning Solvent	ROG	Lower the ROG limits for surface preparation, cleanup, and equipment cleaning in Air District Rules 8-24, 8-29, 8-30, 8-35, and 8-38.
SS 27	Digital Printing	ROG	Reduce emissions of ROG from digital printers.
SS 29	Asphaltic Concrete	ROG	Evaluate the cost effectiveness, and feasibility of limiting solvent content of emulsified asphalt and the availability of substitutes for diesel to clean asphalt-related equipment.
SS 35	PM from Bulk Material Storage, Handling and Transport, Including Coke and Coal	PM	Develop Air District rule limits to prevent and control wind-blown fugitive dust from bulk material handling operations. Establish enforceable visible emission limits to support preventive measures such as water sprays, enclosures, and wind barriers.
SS 36	PM from Trackout	PM	Develop new Air District rule to prevent mud/dirt and other solid trackout from construction, landfills, quarries, and other bulk material sites.
SS 37	PM from Asphalt Operations	PM	Develop an Air District rule to require abatement/control of blue smoke emissions related to asphalt delivery to roadway paving projects.
SS 40	Odors	Odors	Propose amendments to Regulation 7 to strengthen odor standards and enhance enforceability. An evaluation of newer air monitoring technologies will be aimed at increasing enforceability of the rule with respect to a wider range of odorous compounds and sources.
Transportation Source Control Measures			
TR 1	Clean Air Teleworking Initiative	All Pollutants	Develop teleworking best practices for employers and develop additional strategies to promote telecommuting. Promote teleworking on Spare the Air Days.

Strategy No.	Name	Pollutant	Description
TR 2	Trip Reduction Programs	All Pollutants	Implement the regional Commuter Benefits Program (Rule 14-1) that requires employers with 50 or more Bay Area employees to provide commuter benefits. Encourage trip reduction policies and programs in local plans, e.g., general and specific plans while providing grants to support trip reduction efforts. Encourage local governments to require mitigation of vehicle travel as part of new development approval, to adopt transit benefits ordinances in order to reduce transit costs to employees, and to develop innovative ways to encourage rideshare, transit, cycling, and walking for work trips. Fund various employer-based trip reduction programs.
TR 5	Transit Efficiency and Use	All Pollutants	Improve transit efficiency and make transit more convenient for riders through continued operation of 511 Transit, full implementation of Clipper® fare payment system and the Transit Hub Signage Program.
TR 6	Freeway and Arterial Operations	All Pollutants	Improve the performance and efficiency of freeway and arterial systems through operational improvements, such as implementing the Freeway Performance Initiative, the Freeway Service Patrol, and the Arterial Management Program.
TR 7	Safe Routes to School and Safe Routes to Transit	All Pollutants	Provide funds for the regional Safe Routes to School and Safe Routes to Transit Programs.
TR 8	Ridesharing, Last Mile Connection	All Pollutants	Promote carpooling and vanpooling by providing funding to continue regional and local ridesharing programs and support the expansion of carsharing programs. Provide incentive funding for pilot projects to evaluate the feasibility and cost-effectiveness of innovative ridesharing and other last-mile solution trip reduction strategies. Encourage employers to promote ridesharing and carsharing to their employees.
TR 9	Bicycle and Pedestrian Access and Facilities	All Pollutants	Encourage planning for bicycle and pedestrian facilities in local plans, e.g., general and specific plans; fund bike lanes, routes, paths, and bicycle parking facilities.
TR 10	Land Use Strategies	All Pollutants	Support implementation of Plan Bay Area, maintain and disseminate information on current climate action plans and other local best practices, and collaborate with regional partners to identify innovative funding mechanisms to help local governments address air quality and climate change in their general plans.
TR11	Value Pricing	All Pollutants	Implement and/or consider various value pricing strategies.
TR12	Smart Driving	All Pollutants	Implement smart driving programs with businesses, public agencies, and possibly schools, and fund smart driving projects.
TR13	Parking Policies	All Pollutants	Encourage parking policies and programs in local plans, e.g., reduce minimum parking requirements; limit the supply of off-street parking in transit-oriented areas; unbundle the price of parking spaces; support implementation of demand-based pricing (such as “SF Park”) in high-traffic areas.
TR14	Cars and Light Trucks	All Pollutants	Commit regional clean air funds toward qualifying vehicle purchases and infrastructure development. Partner with private, local, state, and federal programs to promote the purchase and lease of battery-electric and plug-in hybrid electric vehicles.
TR16	Indirect Source Review	All Pollutants	Consider a rule that sets air quality performance standards for new and modified development projects.

Strategy No.	Name	Pollutant	Description
TR22	Construction, Freight and Farming Equipment	All Pollutants	Provide incentives for the early deployment of electric, Tier 3 and 4 off-road engines used in construction, freight, and farming equipment. Support field demonstrations of advanced technology for off-road engines and hybrid drive trains.
Energy Control Measures			
EN1	Decarbonize Electricity Production	All Pollutants	Engage with PG&E, municipal electric utilities, and Community Choice Energy to maximize the amount of renewable energy contributing to the production of electricity within the Bay Area as well as electricity imported into the region. Work with local governments to implement local renewable energy programs. Engage with stakeholders including dairy farms, forest managers, water treatment facilities, food processors, public works agencies, and waste management to increase use of biomass in electricity production.
EN2	Decrease Electricity Demand	All Pollutants	Work with local governments to adopt additional energy efficiency policies and programs. Support local government energy efficiency program via best practices, model ordinances, and technical support. Work with partners to develop messaging to decrease electricity demand during peak times.
Building Control Measures			
BL1	Green Buildings	All Pollutants	Collaborate with partners such as KyotoUSA to identify energy-related improvements and opportunities for on-site renewable energy systems in school districts; investigate Fundi g strategies to implement upgrades. Identify barriers to effective local implementation of the CALGreen (Title 24) state-wide building energy code; develop solutions to improve implementation/ enforcement. Work with the Association of Bay Area Government's (ABAG) BayREN program to make additional funding available for energy-related projects in the buildings sector. Engage with additional partners to target reducing emissions from specific types of buildings.
BL2	Decarbonize Buildings	All Pollutants	This measure was implemented in March 2023, when amendments to Regulation 9, Rule 4 and Rule 6 were adopted to include first-of-their-kind zero NO_X requirements for furnaces and water heaters installed in buildings.
BL3	Market-Based Solutions	All Pollutants	Implement a call for innovation to support market-based approaches that bring new, viable solutions to significantly reduce emissions associated with existing buildings.
BL4	Urban Heat Island Mitigation	All Pollutants	Develop and urge adoption of a model ordinance for "cool parking" to promote use of cool surface treatments for new parking facilities and existing surface lots being resurfaced. Develop and promote adoption of model building code requirements for new construction or re-roofing/roofing upgrades for commercial and residential multi-family housing. Collaborate with expert partners to perform outreach to cities and counties to make them aware of cool roofing and cool paving techniques, and of new tools available.
Natural and Working Lands Control Measures			
NW2	Urban Tree Planting	Criteria pollutants, GHG	Develop or identify an existing model municipal tree planting ordinance and encourage local governments to adopt such an ordinance. Include tree planting recommendations the Air District's technical guidance, best practices for local plans and CEQA review.

Strategy No.	Name	Pollutant	Description
NW3	Carbon Sequestration in Wetlands	GHG	Identify federal, state, and regional agencies, and collaborative working groups that the Air District can assist with technical expertise, research, or incentive funds to enhance carbon sequestration in wetlands around the Bay Area. Assist agencies and organizations that are working to secure the protection and restoration of wetlands in San Francisco Bay.
Waste Management Control Measures			
WA3	Green Waste Diversion	All Pollutants	Develop model policies to facilitate local adoption of ordinances and programs to reduce the amount of green waste going to landfills.
WA4	Recycling and Waste Reduction	GHG	Develop or identify and promote model ordinances on community-wide zero waste goals and recycling of construction and demolition materials in commercial and public construction projects.
Water Control Measures			
WR1	Limit GHGs from Publicly Owned Treatment Works	GHG, ROG, TACs	Initiate a process to better understand and quantify GHG emissions at publicly owned treatment works. Explore rulemaking to reduce GHGs emitted directly within POTWs. Promote the use of biogas recovery systems at POTWs.
WR2	Support Water Conservation	GHG	Develop a list of best practices that reduce water consumption and increase on-site water recycling in new and existing buildings; incorporate into local planning guidance.
Super-GHG Control Measures			
SL1	Short-Lived Climate Pollutants	GHG, including black carbon	Reduce methane from landfills and farming activities through various control measures listed under waste and agriculture sectors. Develop a rule to reduce methane emissions from natural gas pipelines and processing operations and amend regulations to reduce emissions of methane and other organic gases from equipment leaks at oil refineries. Enforce applicable regulations on the servicing of existing air conditioning units in motor vehicles, support the adoption of more stringent regulations by CARB and/or the USEPA, and encourage better hydrofluorocarbon (HFC) disposal practices.
SL2	Guidance for Local Planners	GHG	Track progress in adoption and implementation of super-GHG reduction measures in local plans and programs.

SOURCE: Bay Area Air Quality Management District, 2017.

Bay Area Air Quality Management District Regulations

The BAAQMD adopts rules and regulations. All projects are subject to the BAAQMD's rules and regulations in effect at the time of construction. Specific rules applicable to project construction and operation may include, but are not limited to, the following rules:

- **Regulation 2, Rule 1, General Permit Requirements.** This rule includes criteria for issuance or denial of permits, exemptions, appeals against decisions of the air pollution control officer, and BAAQMD actions on applications.
- **Regulation 2, Rule 2, New Source Review.** This rule applies to new or modified sources and contains requirements for best available control technology (BACT) and emission offsets. Rule 2 implements federal New Source Review and Prevention of Significant Deterioration requirements.

- **Regulation 6, Rule 1, General Requirements.** Regulation 6 limits the quantity of PM in the atmosphere by controlling emission rates, concentration, visible emissions, and opacity.
- **Regulation 6, Rules 1 and 6 (Fugitive Dust Control).** This regulation sets standards and requirements for controlling and reducing fugitive dust emissions at dust-generating facilities. Recently adopted in 2018, Rule 6-6 was developed along with a new umbrella regulation, Regulation 6, and amendments to Rule 6-1, to address particulate matter emissions from a variety of activities and operations.
- **Regulation 7, Odorous Substances.** Regulation 7 places general limitations on odorous substances and specific emission limitations on certain odorous compounds. A person (or facility) must meet all limitations of this regulation but meeting such limitations would not exempt such person from any other requirements of the BAAQMD, state law, or national law. The limitations of this regulation are not applicable until the BAAQMD receives odor complaints from 10 or more complainants within a 90-day period, alleging that a person has caused odors perceived at or beyond the property line of such person and deemed to be objectionable by the complainants in the normal course of their work, travel, or residence. When the limits of this regulation become effective, as a result of the citizen complaints described above, the limits remain effective until such time as no citizen complaints have been received by the BAAQMD for 1 year. The limits of this regulation become applicable again if the BAAQMD receives odor complaints from five or more complainants within a 90-day period. The BAAQMD staff investigate and track all odor complaints it receives and make attempts to visit the site and identify the source of the objectionable odor and assist the owner or facility in finding a way to reduce the odor.
- **Regulation 8, Rule 3 (Architectural Coatings).** This regulation limits the quantity of volatile organic compounds in architectural coatings supplied, sold, offered for sale, applied, solicited for application, or manufactured for use within the BAAQMD's jurisdiction.
- **Regulation 8, Rule 5 (Storage of Organic Liquids).** The purpose of this rule is to limit emissions of organic compounds from storage tanks.
- **Regulation 9, Rule 4 and Rule 6 (Building Appliance Rules)** March 2023, amendments to Regulation 9, Rule 4 and Rule 6 include zero NO_X requirements for furnaces and water heaters installed in buildings.
- **Regulation 9, Rule 8 (Stationary Internal-Combustion Engines).** This regulation limits emissions of NO_X and CO from stationary internal-combustion engines of more than 50 horsepower.
- **Regulation 11, Rule 2 (Hazardous Pollutants).** This regulation limits emissions of asbestos during demolition, renovation, milling, and manufacturing and establishes appropriate waste disposal procedures.

d. City of Brisbane Plans, Policies, Ordinances, and Regulations

General Plan

Community Health and Safety Element

The Community Health and Safety Element of the City of Brisbane General Plan contains policies related to air quality. Policies and associated programs relating to the City's consideration of local development projects.

Chapter VI: Conservation

Policy 139: Promote the conservation of non-renewable energy resources.

Policy 140: Encourage energy-efficient building design and site planning.

Policy 141: Encourage the installation of energy-efficient appliances.

Program 141a: Cooperate with PG&E in promoting energy conservation by providing information and referral on energy-efficient appliances and heating and cooling systems.

Policy 142: Continue to support vehicle trip-reduction programs to conserve non-renewable fuels. [See Chapters VI and X of the City's general plan for additional trip reduction policies.]

Policy 193: As a part of land use development analysis, consider the impacts on air resources that will be generated by a project through mobile sources.

Program 193a: Consider the design of roadways, transit facilities, bikeways and pedestrian access in all subdivisions, specific plans, and other land use proposals to evaluate whether and to what extent the design addresses air quality issues.

Program 193b: In conjunction with land use development applications and CEQA review, evaluate whether a proposal may have a significant effect on air quality because of mobile emissions. Require environmental impact analysis and mitigation plans and monitoring, as appropriate.

Program 193c: Discourage drive-up service windows and similar uses that generally result in vehicle idling.

Policy 194: Attempt to minimize dependence on automobile travel by encouraging transit, bicycle and pedestrian alternatives and incorporating alternatives to the automobile in land use planning and project design.

Program 194a: Provide park-and-ride facilities to facilitate use of transit.

Program 194b: Provide bicycle and pedestrian access to all areas of the City to provide alternatives to automobile use.

Program 194c: Require all new development to include design principles that are transit oriented and otherwise reduce dependence on the automobile.

Policy 195: Express support for federal and state programs to improve emissions control devices, reformulate gasoline, develop fuel efficient vehicles, and other technological advances that could serve to reduce mobile emissions.

Policy 196: Support efforts to control fuel emissions and excessive idling of airplanes at San Francisco International Airport.

Policy 197: Continue to improve existing roadways to reduce congestion in order to reduce emissions generated by "stop-and-go" driving.

Program 197a: Use traffic management systems, such as signage and timed signals, to facilitate traffic flow and reduce congestion.

Policy 198: Actively participate in and support the development and implementation of transportation system management plans (TSMs) and transportation demand management measures (TDMs).

Program 198a: Support the implementation of transportation demand management measures by private businesses, such as transit and carpool subsidies, preferential carpool/vanpool parking, flexible work schedules and ride matching services.

Program 198b: Encourage the installation of bicycle lockers, changing rooms and showers, guaranteed ride home, the provision of on-site support services in private businesses and other measures to reduce vehicular trips by employees.

Program 198c: Consider providing incentives as a part of land use development permit approvals for the use of TSM and TDM measures.

Policy 199: Encourage County and regional transportation agencies to improve transit and transportation systems in ways that reduce mobile source emissions.

Policy 200: Express support for State and Federal programs to develop filter control devices, vapor recovery systems, leakless valves, reformulated surface coatings and solvents and other technological advances that could serve to reduce stationary emissions.

Policy 201: Encourage households and businesses to properly manage materials that affect air quality and replace these materials with safer alternatives whenever possible.

Policy 202: Incorporate emissions control practices into City ordinances as appropriate.

Program 202a: Strictly enforce the City's Grading Ordinance provisions for dust control.

Program 202b: Require that demolition and construction projects conform to the BAAQMD recommended dust control measures.

Program 202c: On a periodic basis, review the City's ordinance requirements to assure conformance with BAAQMD standards.

Policy 203: Consider issues of stationary emissions in land use planning and project review.

Program 203a: As part of land use planning, establish buffer zones between sensitive receptors and significant emissions sources, including uses that cause offensive odors or dust.

Program 203b: In conjunction with any surface mining, oil and gas operation or industrial development land use permit, place strict conditions for compliance with best management practices for control of dust, odors and other emissions that have air quality impacts.

Chapter XII: Policies and Programs by Subareas

Policy BL.1: Development within the Baylands Subarea shall be subject to the City's approval of a single specific plan for the entirety of the Baylands Subarea and a development agreement that is consistent with General Plan policies, incorporates all applicable EIR [environmental impact report] mitigation measures, and is consistent with the following standards:

G. The required specific plan for the Baylands shall include a sustainability program for new development consistent with the principles of the Sustainability Framework for the Brisbane Baylands, Final Report accepted by the City Council on November 5, 2015. Baylands development shall be designed so as to be energy neutral on an ongoing basis.

Sustainability Framework for the Brisbane Baylands

Chapter 4, "Sustainability Framework," of the Baylands Specific Plan describes strategies and standards for creating a zero-carbon, zero-waste development that conserves energy and water, increases transit accessibility and the use of nonmotorized transportation modes, enhances habitats and the site's natural environment, establishes resiliency in light of projected sea-level-rise adaptation, provides for sustainable infrastructure development, and addresses other sustainability factors.

On November 5, 2015, the City of Brisbane accepted the final draft for the *Sustainability Framework for the Baylands* (Brisbane Baylands Sustainability Framework). The Brisbane Baylands Sustainability Framework is designed to identify key sustainability elements to be addressed in future Baylands development and creates an approach to implement these principles (City of Brisbane 2015).

The Baylands Specific Plan proposes measures to address the requirements set forth in the Brisbane General Plan and Measure JJ that Baylands development be energy-neutral and consistent with the principles of the Brisbane Baylands Sustainability Framework. The sustainability framework in Chapter 4 of the Baylands Specific Plan is organized to reflect the 10 "One Planet Living" principles defined in 2003 by Bioregional, a United Kingdom–based nonprofit, as a framework for sustainable living. The sustainability framework proposes goals and performance standards intended to define how consistency with each One Planet Living principle should be measured. The One Planet Living principles are a set of 10 principles designed to achieve an ecological footprint consistent with the resources available on one planet; they include the social and economic aspects of sustainability as essential elements to achieving and sustaining the environmental outcomes (City of Brisbane 2015). Principles include Zero Carbon Buildings, Zero Waste, Sustainable Transportation, Local and Sustainable Materials, Local and Sustainable Food, Sustainable Water, Open Space and Habitat, Culture and Heritage, Economic Vitality with Equity and Ecology, and Recreation, Health and Happiness.

Brisbane Climate Action Plan

In September 2015, the City of Brisbane adopted its first climate action plan (CAP), which established a GHG emission reduction goal of 15 percent below 2005 levels by the year 2020. This plan was a comprehensive and strategic approach to sustainability, recommending actions to engage all members of Brisbane's community in a journey to protect the environment. The CAP identified key forces that contribute substantially to GHG emissions and provided strategies for reducing emissions in these areas.

The City's most recent GHG inventory report for the 2021 calendar year, published in 2024, showed an estimated 13.66 percent reduction of emissions, falling short of the initial goal from 2015. In July 2021, via Resolution No. 2021-62 "Climate Emergency Declaration," the City established new emissions reduction targets of 66 percent reduction from the 2005 baseline by 2030 and carbon neutrality by 2040.

Brisbane Municipal Code

Brisbane Municipal Code Section 15.80 specifies green building standards for new developments, including meeting a minimum Leadership in Energy and Environmental Design (LEED) "Silver" rating on the Green Building Project Checklist for all new commercial projects over 10,000 square feet and achieving a "green home" rating on the Multi-Family GreenPoint

Checklist[187] for any residential developments with 20 or more units. To meet these requirements, a variety of energy, stormwater, and water efficiency measures can be implemented that are integrated in green building design, siting, construction, and operations.

Building Code

The latest update to the California Building Code (CBC) was adopted by the City of Brisbane and is effective as of January 1, 2023. The CBC requires that new construction be more energy efficient and includes solar requirements for new residential construction. In addition, through Ordinance 675,[188] the City of Brisbane has chosen to exceed the state's standards including installation of electric vehicle charging infrastructure.

Additionally, on October 19, 2023, the Brisbane City Council adopted an updated Transportation Demand Management (TDM) ordinance amending Brisbane Municipal Code Section 10.52. The TDM ordinance's purpose is to "promote more efficient utilization of existing transportation facilities."

Chapter 15.84, Electric Vehicle Infrastructure

Chapter 15.84 of the City's Municipal Code, the Electric Vehicle Infrastructure Ordinance, sets forth requirements for the installation of electric vehicle (EV) charging equipment in new construction. For new single-family residences, duplexes, and townhouses (and new garages at existing such buildings), the Code requires, where two or more parking spaces per unit are required, the installation of one Level 1 EV Ready Circuit and one Level 2 EV Ready Circuit.[189] For new multifamily residential buildings, the Code requires a minimum of one EV-ready parking space per unit, with a minimum 10 percent of these spaces equipped with Level 2 EV chargers. Additionally, at least 50 percent of guest parking spaces must have EV chargers. Finally, a minimum of 40 percent of the total number of parking spaces must be EV-ready or have chargers installed.[190]

For non-residential new construction, where nine or fewer parking spaces are required, at least one space must be either EV-ready or have an EV charger installed. Where 10 or more parking

[187] Build It Green, a non-profit organization, has developed New Home Construction Green Building Guidelines and a Multi-Family GreenPoint Checklist, based upon the Multi-Family Green Building Guidelines established by the Alameda County Waste Management Authority. See Section 15.80.020 of the Brisbane Municipal Code for more information.

[188] Brisbane Ordinance No. 675 can be found at https://library.municode.com/ca/brisbane/ordinances/municipal_code?nodeId=1185187. Ordinance No. 675 amended CALGreen, as it applies in Brisbane (Municipal Code Section 15.04.043), such that new construction and qualifying alterations "do not use combustion equipment or are ready to accommodate installation of electric heating appliances," with certain exceptions.

[189] Level 1 chargers operate using a standard 120-volt, 20-amp household electrical circuit. Level 2 chargers use higher-output 240-volt power sources (generally with a 40-amp capacity) so that recharge times for EVs are much faster than with Level 1 systems.

[190] Certain exceptions are permitted, including, in the case of multi-family residential buildings, a reduction in the number of EV-ready spaces to fewer than one per unit if fewer than one parking space per unit is required.

spaces are required, at least 15 percent of the required spaces must have EV chargers, with an additional 10 percent or 35 percent more low-power (20-amp) EV ready spaces also required, depending on whether the non-residential use is defined in the Municipal Code as having higher or lower parking turnover.[191]

4.9.4 RELEVANT SPECIFIC PLAN PROVISIONS

a. Active Transportation Facilities

An active transportation network would be developed consisting of an internal network of shared use paths, bicycle facilities, and sidewalks in compliance with the Americans with Disabilities Act (ADA) that would connect to existing local and regional routes. Pedestrian facility types are described in **Table 3-3**. The Baylands pedestrian network is illustrated in **Figure 3-30**. Baylands bicycle and micro-mobility facility types are identified in **Table 3-4** and illustrated in **Figure 3-31**. Furthermore, most of the Specific Plan's residential development is contained within a Transit Priority Area, including Bayshore, Main Street West, Main Street East, and portions of Icehouse Hill Southwest and Icehouse Hill Southeast.

A fare-free shuttle network would be provided to transport Baylands residents and workers throughout the site and connect the Baylands to downtown Brisbane and existing transit routes. Shuttle service is proposed to be established in two phases, initially providing an internal Baylands route and weekday connections to downtown Brisbane as illustrated in **Table 3-5** and **Figure 3-32**.

b. Energy Generation and Conservation

The 2025 Specific Plan requires a minimum of 85,000 megawatt hours (MWh) of electricity to be generated annually. To that end, a 55-acre solar farm will be developed east of the Caltrain right-of-way and south of Visitacion Creek along with building- and other ground-mounted solar installations. Based on the reasonably foreseeable mix of building types anticipated within the Baylands, actual renewable energy generation was estimated to be 92,445 MWh in the Baylands Energy Plan prepared by Thornton Tomasetti Inc. in May 2021. Battery storage facilities and equipment installed in buildings and within sustainable infrastructure areas are proposed to extend the reliability of renewable electricity produced on- and off-site. Electrical demand not met by on-site energy generation is required to be met with 100 percent renewable energy "to the maximum extent allowed by law." The Baylands would feature all-electric

[191] Higher parking turnover uses are those such as retail, restaurants, professional offices, gyms, recreational uses, meeting halls. Lower parking turnover uses are those such as office, Research and Development, industrial, hotels, and schools.

residential and commercial buildings; natural gas facilities would not be provided to Specific Plan development.

c. Transportation Demand Management

In addition to providing a roadway network, pedestrian and bicycle facilities, and transit services described above, the Specific Plan proposes preparation of Transportation Demand Management (TDM) Plans for each applicable site-specific development project as it undergoes site-specific development review. The purpose of these TDM plans is to encourage and incentivize travel other than via use of single-occupant vehicle trips in accordance with the City of Brisbane's TDM requirements contained in Brisbane Municipal Code 10.52.010 et seq. The Specific Plan sets a project-wide trip reduction target of a minimum 25 percent below baseline Average Daily Traffic (ADT).

4.9.5 SIGNIFICANCE CRITERIA

The following criteria were used to determine the significance of air quality impacts.

Threshold AQ-1: **The Baylands Specific Plan would cause a significant impact if the net increase of any non-attainment criteria pollutant would exceed the following BAAQMD Regional Criteria Pollutant Significance Thresholds.**

Pollutant	Construction	Operations	
	Average Daily Emissions (lbs/day)	Average Daily Emissions (lbs/day)	Max. Annual Emissions (tons/yr)
ROG	54	54	10
NO_X	54	54	10
PM_{10}	82 (Exhaust)	82	15
$PM_{2.5}$	54 (Exhaust)	54	10
PM_{10}, $PM_{2.5}$, Fugitive Dust	Implement Best Management Practices	None	None

Threshold AQ-2: **The Baylands Specific Plan would cause a significant impact by exposing sensitive receptors to substantial pollutant concentrations if it would:**

- **Result in an excess cancer risk level of more than 10 in one million, or a non-cancer (i.e., chronic or acute) hazard index greater than 1.0;**
- **Result in an incremental increase of greater than 0.3 micrograms per cubic meter ($\mu g/m^3$) annual average fine particulate matter ($PM_{2.5}$); or**
- **Add daily traffic volumes at any project-affected intersection with more than 44,000 daily vehicles, thus creating a new or exacerbating an existing carbon monoxide (CO) hot spot (9.0 ppm [8-hour average], 20.0 ppm [1-hour average]).**

Threshold AQ-3: The Baylands Specific Plan would cause a significant impact if it would generate odors adversely affecting a substantial number of people.

Threshold AQ-4: The Baylands Specific Plan would cause a significant impact if it would be inconsistent with the San Francisco Bay Area Clean Air Plan.

4.9.6 PROJECT IMPACTS AND MITIGATION MEASURES

a. Threshold AQ-1: Emissions of Criteria Air Pollutants for which the Basin is in Nonattainment

Methodology for Determining Significance in Relation to Threshold AQ-1

The criteria air pollutant thresholds presented under Threshold AQ-1 are those presented within the 2022 BAAQMD CEQA Air Quality Guidelines. Projects that would result in criteria pollutant emissions above these significance thresholds would result in a cumulatively considerable net increase in non-attainment criteria air pollutants within the air basin. As discussed above, the criteria air pollutant NAAQS and CAAQS are intended to incorporate an adequate margin of safety to protect the public health and welfare. Therefore, attainment with the ambient air quality standards can be considered protective of public health.

Construction Activities and Emissions

Construction criteria air pollutant and TAC emissions were estimated using CalEEMod. Demolition, grading, trenching, hauling, and other ground-disturbing activities would also result in fugitive dust emissions.

CalEEMod outputs and detailed calculation spreadsheets are included in Appendix A of the Air Quality Technical Report (EIR Appendix G.1).

Off-Road Equipment

Construction of the proposed project would emit criteria air pollutant emissions from:

- Demolition of existing industrial structures
- Excavation of soil on the eastern portion of the Baylands to be hauled to the area west of the Caltrain right-of-way, including establishment of final grades for Specific Plan development
- Grading of the west side of the Specific Plan area
- Construction of new buildings, utilities, roads, and bridges
- Architectural coating of interior and exterior surfaces
- Paving

For diesel-powered off-road construction equipment, emissions were calculated by CalEEMod assuming fleet average equipment and factors from the OFFROAD2017-ORION v1.0.1 model, which is incorporated in CalEEMod.

On-Road Mobile Sources

CalEEMod, which incorporates the EMFAC2021 on-road emissions model, was used to quantify on-road construction criteria air pollutant and TAC emissions from these sources, including haul trucks used to transport the 2,500,000 cubic yards of excavated material from the eastern portion of the Baylands to the west side, west of the Caltrain right-of-way.

PM emissions can occur from resuspended road dust that is entrained by vehicular travel on paved and unpaved roads and from tire and brake wear. The calculation of the entrained roadway dust emission factor and the calculation of emissions from entrained roadway dust from construction-related vehicle trips were calculated with CalEEMod for trips associated with Baylands development, using default trip lengths, and outside of CalEEMod using CARB entrained road dust emission factors for the above haul truck trips.

Demolition of Existing Buildings

The construction emissions analysis assumed that 272,400 square feet (18 structures) along Industrial Way would be demolished. Thus, the analysis calculated emissions associated with their demolition, using CalEEMod.[192]

Architectural Coatings and Paving

Architectural coating and paving are the predominant sources of ROG emissions during construction. These emissions result from the volatile organic compound (VOC, or ROG) content of the coatings and off-gassing of VOC during paving. The terms VOC and ROG are used interchangeably, both representing volatile, or reactive, organic gases. Emissions from architectural coatings were based on CalEEMod default values of architectural coatings per square footage, default VOC content, which is 100 grams per liter of coating for indoors and 150 grams per liter for outdoors and using the total building square footage provided by the project applicant. Emissions from architectural coating would be compliant with BAAQMD paint VOC regulations. Paving emissions were also based on the CalEEMod default emission rate, which is 2.62 pounds per acre paved, and using the square footage of roadways and parking lots that need to be paved.

[192] While the calculation of mobile source emissions from demolition of structures along Industrial Way uses CalEEMod defaults for the heavy equipment involved in demolition activities, trip-related mobile source emissions for analysis of operations was undertaken based on the VMT analysis undertaken for Impact TRA-1 using EMFAC2021.

Infrastructure, Middle School, and Fire Stations

Infrastructure uses that are analyzed include the following:

- Solar farm
- Water recycling facility (WRF)
- Off-site recycled water supply lines
- Water tank
- Substation
- Battery storage facility

Air pollutant emissions estimates from construction of these uses were based on other, recent environmental documents involving similar facility types and scaled based on their size. Factors that were scaled to best represent the proposed project components included square footage of facility, duration of construction phases, hours of use per equipment, and number of on-site workers. Values for amount of construction equipment, equipment horsepower, and load factors were also used from the example projects for the proposed project modeling inputs as described below.

- The 55-acre solar farm was modeled after the solar photovoltaic power generation facility for the 180-megawatt Little Bear Solar Draft EIR (ESA 2018a) with a reduction scaling factor of 76 percent. This means that the analysis of the Baylands solar farm assumed that the same types of construction equipment would be used as were used for the Little Bear facility, but 76 percent fewer equipment use hours would be required to construct the Baylands facility.
- The 0.95 million gallon per day Baylands water recycling facility was modeled after the 2.75 million gallons per day Morro Bay Water Reclamation Facility Project (ESA 2018b) with a reduction scaling factor of 81 percent.
- A recycled water conveyance pipeline to serve off-site users in the Sierra Point area and Oyster Point portion of South San Francisco would also be constructed using the "cut and cover" open trenching method and would progress at a rate of 100 feet per day from the water recycling facility south along Bayshore Boulevard and Airport Boulevard into South San Francisco.
- The 3.16-million-gallon Baylands water tank/storage facility was modeled after a 6-million-gallon storage facility that was a part of the California-American Water Company Monterey Peninsula Water Supply Project (ESA 2018c) with a reduction scaling factor of 47 percent.
- The 2-acre electrical switching substation within the Baylands was modeled after the 1.7-acre Martin Substation Extension Project (Dudek 2019) with an increased scaling factor

of 18 percent. The battery storage facility was modeled using CalEEMod defaults for an industrial land use.

- The relocated fire station was modeled after the FS-8 Relocation Project (ESA 2022) and the new fire station was modeled after the FS-32 Project (ESA 2023), both in Santa Clara County. The relocated fire station would not introduce new, operational sources of emissions; it would result in new construction emissions only. Therefore, the FS-8 Relocation Project was used as a representative surrogate project. For the new fire station, the new FS-32 Project was used as it would result in new operational emissions sources, in particular from on-road vehicles.
- For land uses that did not have a readily available comparative facility (the middle school and battery storage facility), CalEEMod defaults were used when modeling impacts. The proposed middle school and the battery storage facility were the two land uses that were modeled using CalEEMod defaults.

Operational Activities and Emissions

Land uses that would generate operational emissions include residences and commercial development in the Bayshore, Roundhouse, and Icehouse Hill districts, plus the commercial uses in the East Campus. In addition, the Specific Plan's infrastructure and new fire station would be sources of operational emissions from emergency backup generators and from employee trips. Specific Plan infrastructure includes the water recycling facility, the water tank, the electrical substation, the battery storage facility, and the solar farm.

Sources of operational emissions from the Specific Plan include:

- On-road vehicles
- Landscaping and maintenance of open space areas
- Consumer use of products containing VOCs (paints, solvents, personal care products)
- Architectural coating (interior and exterior)
- Emergency diesel generators
- Energy use (note that the proposed project would be all-electric and not use natural gas)

Operational On-Road Mobile Sources

On-road mobile sources include vehicle trips associated with residents, retail customers, employees, and vendor deliveries and would emit criteria pollutants and TACs in their exhaust, resuspended road dust, tire wear, and brake wear. In addition, gasoline vehicles emit criteria air pollutants and TACs through fuel evaporation. Operational vehicle emissions for the proposed project were estimated based on VMT provided by the Baylands transportation analysis. Emissions were calculated with the CARB EMFAC2021 on-road emissions model and vehicle

fleet mix for San Mateo County. Emission factors were conservatively assumed for the first year of operation as each block's construction is completed. This is a conservative assumption because emissions tend to decrease over time with advancements in fuel economy and new regulations.

Emergency Generators

Operational emissions for emergency generators at all buildings with occupiable space greater than 75 feet in height, and at the relocated fire station, the new fire station, and water recycling facility were calculated assuming a maximum of 50 hours per year of non-emergency testing operation, consistent with the Airborne Toxic Control Measure for Stationary Compression Ignition Engines (17 CCR section 93115) (CARB 2011) plus an additional 100 hours for assumed emergency use. Criteria pollutant and TAC emissions were calculated assuming the generators would be compliant with BAAQMD's BACT, which requires the use of Tier 4 engines for generators 1,000 horsepower and larger (BAAQMD 2021).

Architectural Coatings

Operational architectural coatings account for the reapplication of paint and coatings on interior and exterior surfaces, which would result in ROG emissions. Architectural coating emissions were estimated using a factor from CalEEMod that is based on the VOC content of the coatings and total building square footage, independent of the type of building.

Consumer Products

Consumer product use would be the predominant source of ROG emissions during proposed project operation. Consumer product emissions come from various non-industrial solvents, including cleaning supplies, kitchen aerosols, cosmetics, and toiletries, which emit VOCs during their use. Emissions from consumer products were calculated using the total building square footage of the proposed project. Factors from CalEEMod were used to estimate these emissions. These factors, which are independent of the building type, are based on VOC content per square foot and total building square footage.

Energy Use

The consumption of fossil fuels to generate electricity and to provide central heating, cooling, and hot water generates criteria pollutant emissions. The Specific Plan would not extend natural gas service to Baylands buildings. Therefore, no criteria pollutant emissions associated with Baylands development would be generated from natural gas combustion.

Solar-powered infrastructure systems are proposed to be installed on buildings, ground mounted, and where feasible, over parking lots that would total 92,445 MWh of annual generation. An approximately 55-acre solar farm would be installed within the eastern portion

of the Baylands between Visitacion Creek and the relocated Lagoon Road on a phased basis as portions of the landfill closure process are completed.

The Specific Plan proposes battery storage for each building with an estimated total of 30 megawatts (MW) of distributed battery storage. Additionally, a front-of-the-meter, 250 MW utility-scale battery storage facility is proposed to serve as a regional resource. As discussed in Section 4.11, *Energy Resources*, the Specific Plan does not guarantee development of the 250 MW utility-scale battery storage facility, since its construction is dependent on a number of market and regulatory factors beyond the control of the applicant or the City of Brisbane. Thus, the air quality benefits of the utility-scale battery storage facility were not factored into air quality impact analysis.

Landscaping Equipment

Emissions from landscaping and maintenance of the open space areas designated as community greens were calculated using CalEEMod and based on information regarding the size of the open space area. As a conservative measure, the recent law (Assembly Bill 1346) banning the sale of gasoline-powered landscaping equipment by 2024 was not accounted for, since there is no prohibition on use of non-electric equipment purchased prior to 2024 and such non-electric equipment already in operation could continue.

Net Increase in Emissions of Criteria Pollutants

Existing industrial uses along Industrial Way are anticipated to move elsewhere within the air basin once their operations cease within the Specific Plan area. Thus, existing emissions from these uses would not be retired by Specific Plan development. In addition, other existing uses within the Specific Plan area would continue during and following Baylands development, including Recology uses along Tunnel Avenue, Golden State Lumber, the Kinder Morgan Tank Farm, Bayshore Sanitary District pump station, and Machinery & Equipment, Inc. The existing Mission Blue Nursery would also continue operations, albeit at a new location on Icehouse Hill. Thus, the "net increase" in emissions of criteria pollutants that would result from Specific Plan development is equivalent to the emissions of new uses proposed by the Specific Plan.

Infrastructure, Middle School, and Fire Stations

Air pollutant emissions from operation of the infrastructure, middle school, and fire station uses (listed above) would result from employee vehicle trips, emergency backup generators, consumer product use, and architectural coatings. Emissions from emergency backup generators, consumer product use, and architectural coatings were calculated as described above for each of these categories. For employee vehicle trips, emissions were calculated using the EMFAC2021 model and projected number of employees provided by the applicant.

Emergency Fuel Tanks at the Corporation Yard

As part of the City's ongoing emergency preparedness planning, one aboveground, 2,000-gallon diesel or ethanol storage tank and two, 1,000-gallon mobile propane tanks are proposed to provide enough fuel for 72 hours of emergency fuel demands for City and emergency response use. These tanks would not be a source of substantial TACs from volatile emissions, because no acute, chronic, or carcinogenic TACs are emitted from uncombusted, stored diesel or propane fuel.[193] In addition, tanks would require permits from BAAQMD and be subject to its Rule 8-5. BAAQMD permit conditions for these tanks would include measures to limit leaking, fugitive organic compounds, such as being equipped with liquid mounted primary seals and a zero-gap secondary seals, and no ungasketed roof fittings.[194]

Combined Construction and Operational Emissions

The Specific Plan is estimated to be constructed over a period of 17 years, with some building occupancy and operational emissions occurring while construction of other portions of the site proceeds. In years when construction would coincide with proposed project operation, construction emissions are combined with operational emissions.

As shown in **Table 3-8**, grading operations are anticipated to commence in 2025, with building construction starting in 2027. As a result, construction activities could occur concurrent with occupancy of buildings within the western portion of the Baylands as early as 2029 once construction of several blocks within the Roundhouse District is completed and those blocks are occupied. Thus, project emissions are assumed to include both construction and operational emissions starting in 2029 and continuing through 2042.

The anticipated sequencing of Baylands development is shown below. This sequencing was used for the purpose of developing the analysis of construction and operational emissions. The development schedule in **Table 3-8** shows the assumed sequencing of each construction activity that was used to determine annualized emissions, including the potential for construction and operational emissions to overlap in time. Occupation of dwelling units and commercial buildings is assumed to start at the beginning of the year following completion of construction.

Impact Assessment

Baylands construction activities would emit criteria air pollutant emissions in the form of fugitive dust during earthmoving and ground-disturbing activities; fugitive dust from travel on

[193] The CARB Hot Spots Reporting and Analysis tool, used for health risk assessments of TACs, does not have health risk values for organic compounds in uncombusted diesel or propane fuel (https://ww2.arb.ca.gov/resources/documents/harp-air-dispersion-modeling-and-risk-tool?keywords=2025).

[194] BAAQMD Permit Handbook, accessed March 25, 2025, https://www.baaqmd.gov/~/media/files/engineering/permit-handbook/baaqmd-permit-handbook.pdf?rev=fd6da37a0862483f899488a1f2b7f2fb&sc_lang=en.

paved roads; and exhaust from heavy construction equipment, construction material delivery trucks (including concrete and dump trucks), and construction worker vehicles. Each of these activities is discussed below.

Fugitive Dust Generated by Construction Activities

Specific Plan related demolition, soil transport, remediation, grading, and other construction activities would cause wind-blown dust that would contribute particulate matter to the local atmosphere.

Fugitive dust includes not only PM_{10} and $PM_{2.5}$, but also larger particles. Dust can be an irritant and cause watering eyes or irritation to the lungs, nose, and throat. Demolition, excavation, and other construction activities can cause wind-blown dust to add to particulate matter in the local atmosphere. Although there are federal standards for air pollutants and state and regional air quality control plans, air pollutants continue to have impacts on human health throughout the country. CalEPA has found that particulate matter exposure can cause health effects at levels lower than national standards. Thus, the BAAQMD does not maintain thresholds for fugitive dust emissions but recommends implementation of best management practices in its CEQA Guidelines to reduce fugitive dust emissions. Adherence to BAAQMD's best management dust minimization practices, which are mandated by the State Water Board Construction Stormwater General Permit, Order 2022-0057-DWQ, would reduce potential dust-related criteria air pollutant impacts during project construction to below the applicable threshold. The best management dust minimization practices listed in this regulation are equivalent to those in the BAAQMD 2022 CEQA Guidelines Table 5-2.

Construction-Related Criteria Air Pollutant Emissions

Specific Plan construction activities have the potential to create temporary air quality impacts through emissions of criteria air pollutants associated with the use of heavy-duty construction equipment, construction workers' vehicle trips, and truck hauling trips. Fugitive ROG emissions would result from the application of architectural coatings and paving. Demolition and construction activities would require the use of heavy trucks, excavators, material loaders, cranes, and other mobile and stationary construction equipment. The assessment of construction criteria air pollutant impacts considers each of these potential sources.

As shown in **Table 3-8**, grading operations are anticipated to commence in 2025, with building construction starting in 2027. As a result, construction activities could occur concurrent with occupancy of buildings within the western portion of the Baylands as early as 2029. Thus, project emissions are assumed to include both construction and operational emissions starting in 2029 and continuing through 2042. Operational emissions sources would include architectural coating from tenant improvements, consumer products, exhaust from on-road vehicles (mobile emissions), area sources such as landscaping equipment for open space areas,

and emergency generator testing and use. There would be no natural gas combustion emissions because the proposed project would use only electricity.

Emissions were analyzed for each year of construction. Emissions of NO_X tend to be higher in years with site grading and excavation activities that require heavy diesel equipment and haul trucks. Emissions of ROG are higher during the building construction phases due to architectural coating and paving. Pollutants that would be generated during construction are presented in **Table 4.9-7** for:

- First year of construction, which is when demolition would be undertaken, and grading operations would start (assumed to be 2025);
- The years of maximum emissions for each pollutant; and
- Phase 1 buildout, at which time construction activities west of the Caltrain right-of-way would cease (assumed to be 2038).

The emissions for the first year of grading (assumed to be 2025) would only be from construction. The second year of grading represents the highest year for NO_X emissions. NO_X is the predominant pollutant of concern from diesel-fueled heavy equipment and trucks.

As shown in **Table 4.9-7**, construction emissions of NO_X would exceed significance thresholds. At buildout of Phase 1 (assumed to be in 2038), net new Phase 1 buildout operational emissions would exceed significance thresholds for all pollutants, as would combined construction and net new Phase 1 buildout emissions. Most NO_X emissions would be generated from heavy construction equipment and on-road heavy-duty truck exhaust. Additional NO_X emissions from operation would be generated mostly by on-road passenger vehicles and diesel-fueled emergency backup generators.

Most ROG emissions during construction would be generated from architectural coatings (assuming compliance with BAAQMD Rule 8-3 on VOC content) and during operations from on-road mobile sources and from consumer product use. Construction PM_{10} and $PM_{2.5}$ emissions are mainly from diesel equipment and truck exhaust. These emissions do not exceed significance thresholds during construction. Operational emissions of PM_{10} and $PM_{2.5}$ exceed the thresholds at Phase 1 and full buildout, mainly due to resuspended road dust from on-road vehicles. Refer to Appendix A of the Air Quality Technical Report, *Emissions Calculations*, (EIR Appendix G.1) for detailed construction emissions by source.

Table 4.9-7: Increase in Criteria Air Pollutant Emissions During Construction and Operation

Milestone	Average Daily Construction Criteria Pollutant Emissions (pounds/day) [a]				Net Increase Operational Criteria Pollutant Emissions (pounds/day) [a]				Average Daily Construction and Operational Criteria Pollutant Emissions (pounds/day) [a]			
	ROG	NO_X	PM_{10}	$PM_{2.5}$	ROG	NO_X	PM_{10}	$PM_{2.5}$	ROG	NO_X	PM_{10}	$PM_{2.5}$
First year of Phase 1 construction	23.4	**282.1**	8.8	8.7	—	—	—	—	23.4	**282.1**	8.8	8.7
Construction year with maximum NO_X emissions (year 2026)	22.1	**283.4**	7.38	18.9	—	—	—	—	22.1	283.4	7.38	18.9
Construction year with maximum PM_{10} and $PM_{2.5}$ emissions (year 2028)	12.2	**109.4**	2.74	2.74	**0.5**	**1.4**	**0.2**	**0.2**	**12.7**	**110.8**	**2.89**	**2.89**
Construction year with maximum ROG emissions (year 2033)	18.5	32.2	0.37	0.36	**94.4**	**12.5**	**3.66**	**1.22**	**112.9**	**44.7**	**4.03**	**1.58**
Phase 1 Buildout and Initial Phase 2 construction	1.0	8.1	0.1	0.1	**308.4**	**115.9**	**235.0**	**62.0**	**309.4**	**124.0**	**235.1**	**62.1**
Full Specific Plan Buildout	—	—	—	—	**426.2**	**133.9**	**326.0**	**83.7**	**426.2**	**133.9**	**326.0**	**83.7**
Significance Threshold	**54**	**54**	**82**	**54**	**54**	**54**	**82**	**54**	**54**	**54**	**82**	**54**

SOURCE: ESA, *Brisbane Baylands Air Quality Technical Report*, February 2025.

ABBREVIATIONS: PM = particulate matter; $PM_{2.5}$ = PM less than 2.5 microns in diameter; PM_{10} = PM less than 10 microns in diameter; ROG = reactive organic gases; NO_X = nitrogen oxides

NOTES: **Bold values** = threshold exceedance

a. Emissions estimated using CalEEMod® version 2022.1 and EMFAC2021. Due to rounding, numbers in columns may not add to totals.

Net Increase in Operational Criteria Air Pollutant Emissions

Operations at the completion of Phase 1 and at full buildout would generate increased emissions of criteria pollutants for which the basin is in non-attainment. In addition, ROG emissions would be generated from consumer product use involving paints, solvents, sprays, and other products containing VOCs. Finally, for buildings that are 75 feet or more in height, diesel emergency backup generators would be an additional minor source of criteria pollutant emissions during weekly testing and maintenance.

At Specific Plan buildout, the majority of criteria pollutant emissions would have the following sources:

- ROG emissions – consumer product use (56 percent), with the remaining ROG emissions from architectural coatings and landscaping equipment.
- NO_X emissions – mobile source exhaust emissions (95 percent), with the remaining NO_X emissions from landscaping equipment.
- PM_{10} and $PM_{2.5}$ emissions – resuspended road dust (99 percent), with the remaining emissions from landscaping equipment.

Table 4.9-7 and **Table 4.9-8** present the increase[195] in operational emissions through construction and buildout of Phase 1 to full buildout of the Specific Plan. Emissions include those from mobile sources, consumer product use, architectural coating, landscaping of open space community greens areas, and emergency generator use. Emissions of PM_{10} and $PM_{2.5}$ in these tables include vehicle exhaust and fugitive sources including re-suspended road dust, brake wear, and tire wear.

[195] The existing emissions of the Specific Plan's Existing Use areas (e.g., Recology uses along Tunnel Avenue, Golden State Lumber, Bayshore Sanitation District pump station, and Machinery & Equipment, Inc.) would not change over time and have not therefore been calculated as part of Baylands development. Existing uses within buildings along Industrial Way that would be demolished to make way for Specific Plan development are assumed to relocate elsewhere within the Bay Area and were therefore not subtracted from the Specific Plan buildout emissions to reflect the Specific Plan's net increase in emissions.

Table 4.9-8: Baylands Operational Emissions, Buildout of Phase 1, and the Full Specific Plan

Milestone	Criteria Pollutant Emissions [a]							
	Annual Emissions (tons/year)				Average Daily Emissions (pounds/day) [b]			
	ROG	NO_X	PM_{10}	$PM_{2.5}$	ROG	NO_X	PM_{10}	$PM_{2.5}$
Phase 1								
Mobile	**16.6**	**12.1**	**42.5**	**10.7**	**90.8**	**66.1**	**232.8**	**58.7**
Area	**31.6**	**0.0**	**0.0**	**0.0**	**173.4**	**0.0**	**0.0**	**0.0**
Landscaping	**6.2**	**0.4**	**0.1**	**0.1**	**33.9**	**2.2**	**0.7**	**0.6**
Emergency generators	**1.7**	**7.2**	**0.3**	**0.3**	**9.3**	**39.6**	**1.4**	**1.4**
Total Phase 1 Emissions	**56.1**	**19.7**	**42.9**	**11.1**	**307.5**	**107.9**	**234.9**	**60.7**
Significance Thresholds	**10**	**10**	**15**	**10**	**54**	**54**	**82**	**54**
Exceeds Thresholds?	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	No
Full Specific Plan Buildout								
Mobile	**23.3**	**15.6**	**59.0**	**14.9**	**127.7**	**85.4**	**323.4**	**81.4**
Area	**42.8**	**0.0**	**0.0**	**0.0**	**234.8**	**0.0**	**0.0**	**0.0**
Landscaping	**9.7**	**0.6**	**0.2**	**0.1**	**53.3**	**3.2**	**1.2**	**0.9**
Emergency generators	**1.9**	**8.3**	**0.3**	**0.3**	**10.4**	**45.3**	**1.5**	**1.5**
Total Buildout Emissions	**77.8**	**24.5**	**59.5**	**15.3**	**426.2**	**133.9**	**326.1**	**83.8**
Significance Thresholds	**10**	**10**	**15**	**10**	**54**	**54**	**82**	**54**
Exceeds Thresholds?	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**

SOURCE: ESA, *Brisbane Baylands Air Quality Technical Report*, February 2025.

ABBREVIATIONS: CalEEMod = California Emissions Estimator Model; $PM_{2.5}$ = PM less than 2.5 microns in diameter; PM_{10} = PM less than 10 microns in diameter; ROG = reactive organic gases; NO_X = nitrogen oxides; PM = particulate matter

NOTES: **Bold values** = threshold exceedance

a. Emissions estimated using CalEEMod version 2022.1. Due to rounding, numbers in columns may not add to totals.
b. Operational emissions shown represent activity and emissions across 365 days per year.

Regional Mobile Source Emissions Based on VMT

The transportation study analyzed the effect on cumulative VMT for the nine-county Bay Area region that would occur if the development proposed by the Specific Plan were instead spread out between San Francisco and the rest of San Mateo County. As shown in **Table 4.9-9**, by providing mixed-use development that places housing in proximity to entertainment, retail, visitor lodging, and employment opportunities, the Specific Plan could enable residents to live, work, and shop without the use of motor vehicles. Many of the Specific Plan area's 2,200 dwelling units and employment-generating uses are located within a ½-mile walk of the Caltrain Bayshore Station or a SamTrans bus, Muni bus, or Muni light rail transit stop, or within a ¼-mile walk of a Baylands Shuttle stop.

Table 4.9-9: Total Vehicle Miles Traveled

Land Use	Cumulative 2040 No Project	Cumulative plus Project Buildout 2040 No Interchange	Cumulative plus Project Buildout 2040 with Interchange
9-County Bay Area	197,771,000	197,691,000	197,666,000
Change	—	-0.04%	-0.05%

SOURCE: C/CAG Travel Demand Model; Fehr & Peers, 2024

Significance Conclusion for Impact AQ-1

During site grading, average daily emissions of NO_X would exceed applicable thresholds. Once grading activities are completed, construction emissions would be minimal but would add to operational emissions of residential and commercial uses as buildings are completed and occupied. Thus, a significant impact would occur during site grading.

Operational emissions of ROG, NO_X, and PM_{10} from Phase 1 development would exceed annual and daily thresholds, resulting in a significant impact. The addition of Phase 2 development would increase operational emissions of these criteria pollutants and also contribute sufficient emissions such that the Specific Plan would also exceed annual and daily thresholds for $PM_{2.5}$, resulting in a significant impact.

Recent Regulations Not Quantified in the Analysis

The CalEEMod and EMFAC2021 emissions modeling programs that were used to estimate project emissions provide for future emission reductions that would be achieved by many but not all existing regulations, because there are newer regulations that have been adopted but are not yet included within CalEEMod and EMFAC2021 emission factors and/or algorithms. These are presented in Chapter 2, Section 2.5 Regulatory Context for Baylands Development. The regulations presented under *Newest Vehicle Regulations in 2021 and 2022* include the full description of the most recently adopted regulations that would serve to reduce on-road vehicle emissions and include the following:

- Heavy-Duty Inspection and Maintenance (2021)
- Advanced Clean Cars II (2022)
- Advanced Clean Fleets (2022)

The effect of these regulations is not included in CalEEMod or EMFAC2021 and thus not quantified in the analysis. However, these regulations would reduce emissions of NO_X and DPM from heavy diesel trucks, and they would reduce criteria pollutant emissions associated with gasoline-powered light duty passenger vehicles. Since the reductions from these regulations is not quantified, this impact would be significant.

Program EIR Mitigation Measures

MM AQ-1a: Clean Off-Road Construction Equipment (Program EIR Mitigation Measure 4.B-2a). To reduce construction vehicle emissions, the following provisions shall be incorporated into construction specifications for all site-specific development and on- and off-site infrastructure projects:

i. Idling times shall be minimized either by shutting diesel-powered or gasoline-powered equipment off when not in use or reducing the maximum idling time of diesel-powered equipment to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.

ii. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. It shall be the contractor's responsibility to ensure that all equipment has been checked by a certified mechanic and determined to be running in proper condition prior to operation.

iii. All construction contract specifications shall include a requirement that on-road diesel trucks used to transport spoils consist of 2020 or newer model-year trucks with factory-built engines. All on-road diesel trucks shall be required to have emission control labels as specified in 13 CCR 2183(c) or any subsequent updates to this CARB regulation, whichever is more stringent. The construction contract specifications shall require that the contractor submit to the City a comprehensive inventory of all on-road trucks used to haul spoils. The inventory shall include each vehicle's license plate number, the engine production year, and a notation of whether the truck is in possession of an emission control label as defined in 13 CCR. The contractor shall update the inventory and submit it monthly to the City throughout the duration of the project.

MM AQ-1b: Tier 3 Off-Road Construction Equipment (Program EIR Mitigation Measure 4.B-2b). All construction contract specifications shall include a requirement that off-road construction equipment used for site improvements shall be equipped with Tier 3 (Tier 2 if greater than 750 hp) diesel engines or better. All diesel generators used for project construction must meet Tier 4 emissions standards. If new emissions standards are adopted by U.S. EPA during project construction, construction contract specifications shall incorporate whichever standard is more stringent.

Significance Conclusion for Impact AQ-1 with Implementation of Program EIR Mitigation Measures

The Storm Water Pollution Prevention Plans (SWPPPs), mandated by the State Water Board Construction Stormwater General Permit, Order 2022-0057-DWQ, require that the Specific Plan implement all the best management practices required by the BAAQMD to reduce construction fugitive dust to less-than-significant levels (BAAQMD 2022 CEQA Guidelines Table 5-2). This includes all the elements in Program EIR Mitigation Measure 4.B-1. Consequently, dust-related criteria air pollutant impacts during project construction would be less than significant.

With adherence to existing regulations, new regulations, and implementation of mitigation measures from the Program EIR, construction exhaust emissions would remain above significance thresholds.

Additional Construction Mitigation Measures

MM AQ-1c: Zero-Emissions and Tier 4 Off-Road Construction Equipment. The following measures shall be required for construction equipment, which would reduce ROG, NO_X, PM_{10} (including DPM), and $PM_{2.5}$ from equipment exhaust:

1. *Engine Requirements.* All off-road equipment greater than 25 horsepower shall meet the following requirements:
    a. All portable engines, such as generators, shall be electric. No propane or natural gas generators shall be used.
    b. Zero-emissions (ZE) construction equipment models, which currently include electric and hydrogen fuel cell technologies, shall be used for all equipment that is commercially available as plug-in or battery-electric equipment. Portable equipment shall be powered by grid electricity. Electric equipment shall include, but is not limited to, concrete/industrial saws, sweepers/scrubbers, aerial lifts, welders, air compressors, fixed cranes, forklifts, and cement and mortar mixers, pressure washers, and pumps. To qualify for an exception, the applicant shall provide the City with evidence supporting its conclusion that electric equipment is not commercially available.
    c. Engines that cannot meet zero-emissions standards must meet or exceed either USEPA or CARB Tier 4 Final off-road emission standards.
    d. Engines shall be fueled with alternative fuels, including natural gas, propane, hydrogen fuel cell, and electricity, as commercially available and to the maximum extent feasible during each construction phase and activity.

e. The Brisbane Community Development Director may permit other best technology that becomes commercially available in the future as substitution(s) for the above items a–d, provided that the project sponsor documents to the satisfaction of the Brisbane Community Development Director that (1) the technology would result in ROG, NO_X, PM_{10}, and $PM_{2.5}$ emissions reductions equivalent or greater than the measure(s) it would substitute for and (2) it would not increase other pollutant emissions or exacerbate other impacts, such as noise. This may include new alternative fuels or engine technology for off-road equipment (such as electric or hydrogen fuel cell equipment) that is not available as of 2025.

f. Idling time for off-road equipment not in use shall be limited to 2 minutes, except as provided in exceptions to the applicable state regulations regarding idling for off-road equipment. Documentation shall be provided to equipment operators in multiple languages (e.g., English, Spanish, Chinese) to remind operators of the 2-minute idling limit.

g. Construction contractors shall be required to properly maintain and tune equipment in accordance with manufacturer specifications.

2. All portable construction tools and equipment less than 25 horsepower shall be electric powered.

3. For purposes of this mitigation measure, zero-emissions off-road equipment shall ordinarily be considered "commercially available" if the vehicle is capable of serving the intended purpose and is included in the California Air Resources Board's Advanced Clean Equipment (ACE) List, https://ww2.arb.ca.gov/our-work/programs/msei/off-road-advance-clean-equipment, included in California Air Resources Board's Clean Off-Road Equipment Voucher Incentive Project (CORE) catalog, https://californiacore.org/equipmentcatalog/, or listed as available in the US on the Global Commercial Vehicle Drive to Zero Off-Road Zero-Emissions Technology Inventory (ZETI) inventory, https://globaldrivetozero.org/tools/zeti-offroad/. The City shall be responsible for the final determination of commercial availability, based on all the facts and circumstances at the time the determination is made. For the City to determine that such vehicles are commercially unavailable, the operator must submit documentation from a minimum of three ZE off-road equipment dealers identified on the ACE or CORE websites demonstrating the inability to obtain the required ZE off-road equipment needed within 6 months.

4. *Exceptions to Requirement 1c, above.* The City of Brisbane Community Development Director may permit exceptions to the requirements of 1.a, 1.b, 1.c, 1.d, and 2 subject to the provisions of requirements in **Tables 4.9-10 and 4.9-11**, below.

Sufficient documentation shall be provided by the construction contractor with a request for any exception described above to demonstrate the need for the requested exception. Any exception granted by the Brisbane Community Development Director shall be based on substantial evidence provided by the construction contractor that one or more of the above exception conditions exists.

Table 4.9-10: Exceptions to Mitigation Measure MM AQ-1d, Items 1.a, 1.b, 1.c, 1d, and 2

Requirement	Condition(s) for Exceptions
1.a. Electric engines for portable equipment 2. Electric equipment less than 25 horsepower	If electric power from the grid becomes unavailable within the Baylands with the outage anticipated to last more than two (2) working days, non-electric equipment may be used.
1.b Zero-Emissions (ZE) engines for construction equipment	The Brisbane Community Development Director may permit use of non-electric equipment should the construction contractor demonstrate to the Director's satisfaction that such zero-emissions equipment is not commercially available as defined above. Any non-zero-emissions equipment permitted for use by the Brisbane Community Development Director shall be the next cleanest piece of commercially available equipment that would reduce exhaust emissions of ROG, NO_X, PM_{10}, and $PM_{2.5}$.
1.c. Tier 4 Final emission standards	The Brisbane Community Development Director may permit use of equipment that does not meet Tier 4 Final standards such as but not limited to bore/drill rigs required for grading/shoring/excavation and for mobile cranes required for building construction should the construction contractor demonstrate to the Director's satisfaction that: (1) The contractor does not have the required type of equipment within its current available inventory, has ordered such equipment at least 60 days in advance, and has made a good faith effort to lease or rent such equipment but it is not available; (2) A particular piece of Tier 4 Final off-road equipment is technically or financially infeasible; (3) The equipment would not produce desired emissions reduction due to required operating modes; or (4) There is a compelling emergency need to use off-road equipment that is not Tier 4 Final compliant.
1.d. Alternative fuel engines for construction equipment	The Brisbane Community Development Director may permit use of non-alternative fueled equipment should the construction contractor demonstrate to the Director's satisfaction that: (1) The use of alternative fuels for internal combustion engines would negatively affect construction performance or void equipment warranties; or (2) If the use of alternative fuels would result in additional ROG, NO_X, PM_{10}, and/or $PM_{2.5}$ emissions compared to the proposed equipment.

NOTES: Equipment subject to any of the above criteria shall be the next cleanest piece of equipment that is commercially available, or another alternative that results in equivalent or greater reductions of ROG, NO_X, PM_{10},

Requirement	Condition(s) for Exceptions
and $PM_{2.5}$ emissions, according to **Table 4.9-11** below. Emerging technologies with verifiable emissions reductions supported by substantial evidence may also be employed in lieu of the step-down schedule below, if those technologies meet the requirements of 1.e, above.	

Table 4.9-11: Engine Compliance Alternatives

Compliance Alternative	Minimum Engine Technology / Emissions Standard / Emissions Control
1	Alternative fuels that reduce ROG, NO_X, PM_{10}, and $PM_{2.5}$ emissions compared to the equivalent Tier 4 Final diesel engine.
2	Tier 4 Final
3	Tier 4 Interim

HOW TO USE THE TABLE: If zero-emissions engines are not available, then the Project sponsor shall meet Compliance Alternative 1. If off-road equipment meeting Compliance Alternative 1 is not available, then the Project sponsor shall meet Compliance Alternative 2. If engines that comply with Tier 4 Final off-road emission standards are not available, then the Project sponsor shall meet Compliance Alternative 3.

MM AQ-1d: Super-Compliant VOC Architectural Coatings during Construction. "Super-compliant" volatile organic compound (VOC) (i.e., ROG) architectural coatings that meet the regulatory limits in South Coast Air Quality Management District rule 1113 (SCAQMD 2024),[196] which currently requires a limit of 10 grams VOC per liter shall be used during construction for all interior and exterior spaces and shall include this requirement on plans submitted for review to the planning department. The project sponsor shall submit a signed certification statement that this requirement has been incorporated into contract specifications.

MM AQ-1e: Clean On-Road Construction Trucks. Heavy-duty on-road construction trucks shall comply with the following, which would reduce ROG, NO_X, PM_{10}, and $PM_{2.5}$ emissions:

1. *Engine Requirements.*
    a. Use alternative-fueled or zero-emissions vehicles (ZEVs) that would reduce emissions below a diesel-fueled vehicle such as electricity, hydrogen fuel cell, natural gas, or propane. If alternative fuels are not commercially available, all on-road heavy-duty diesel trucks with a gross vehicle weight rating of 19,500 pounds or greater used within the Specific Plan area (such as haul trucks, water trucks, dump trucks, concrete trucks, and vendor trucks) shall be model year 2020 or newer.

[196] South Coast AQMD Rule 1113 is required for the Baylands since it is more stringent than comparable BAAQMD requirements.

b. Any other best technology commercially available in the future (i.e., not available as of 2025) may be used in lieu of or in addition to the above item 1.a, provided that (1) the technology would result in equivalent or greater ROG, NO_X, PM_{10}, and $PM_{2.5}$ emissions reductions; and (2) such measures would not increase other pollutant emissions or result in other impacts, such as noise.

c. Require the idling time for on-road vehicles be limited to 2 minutes, except as provided in exceptions to the applicable state regulations regarding idling for on-road vehicles. Documentation shall be provided to truck drivers in multiple languages (e.g., English, Spanish, Chinese) to remind operators of the 2-minute idling limit.

d. For purposes of this mitigation measure, an alternative-fueled and ZEV truck shall ordinarily be considered commercially available if the vehicle is capable of serving the intended purpose and is included in California's Hybrid and Zero-Emissions Truck and Bus Voucher Incentive Project, https://californiahvip.org/ or listed as available in the US on the Global Commercial Vehicle Drive to Zero inventory, https://globaldrivetozero.org/. The City shall be responsible for the final determination of commercial availability, based on all the facts and circumstances at the time the determination is made. In order for the City to make a determination that such vehicles are commercially unavailable, the operator must submit documentation from a minimum of three (3) ZEV dealers identified on the californiahvip.org website demonstrating the inability to obtain the required ZEVs or equipment needed within 6 months.

2. *Exceptions.* The lead agency grants an exception to the alternative fuel requirements of item 1.a if alternative fuels are not commercially available or the use of alternative fuels for internal combustion engines is not technologically feasible, would void truck warranties, or would result in additional ROG, NO_X, PM_{10}, and $PM_{2.5}$ emissions compared to traditional fuels. The waiver may be granted by the Brisbane Community Development Director based on substantial evidence provided by the project sponsor that one or more of the above waiver conditions exists.

3. The documentation, as described in Mitigation Measure MM AQ-2b item 3 above, shall include a description of each general category of on-road trucks required to comply with item 1, *Engine Requirements*. The description shall also specify the engine model years and fuel type being used (e.g., diesel, electricity, natural gas).

4. The Certification Statement, as described in Mitigation Measure MM AQ-2b item 4 above, shall apply to all applicable requirements for on-road trucks.

MM AQ-1f: Conveyor System for Transport of Excavated Material. An overland conveyor system shall be constructed to transport excavated soil material from the eastern portion of the site to the western portion in lieu of transport by trucks. The conveyor system shall be electric and shall include water sprays for dust reduction during transport. Movement of soil from the eastern to the western portion of the Specific Plan area by truck shall be permitted only if the California Public Utilities Commission does not approve a conveyor system crossing over the Caltrain right-of-way.

Additional Operations Mitigation Measures

MM AQ-1g: Super-Compliant VOC Architectural Coatings during Operation. Future tenant improvements provided by building owners shall use super-compliant VOC architectural coatings for all interior and exterior painting. "Super-compliant" coatings refer to paints that meet the more stringent regulatory limits in the current version of South Coast Air Quality Management District rule 1113,[197] which requires a standard of 10 grams VOC per liter or less (http://www.aqmd.gov/home/regulations/compliance/architectural-coatings/super-compliant-coatings).

MM AQ-1h: Best Available Emissions Controls for Stationary Emergency Generators. To reduce emissions of ROG, NO_X, PM_{10}, and $PM_{2.5}$ associated with operation of the proposed project's emergency generators, the project applicant shall implement the following measures.

1. Permanent stationary emergency generators installed on-site shall have engines that meet or exceed CARB Tier 4 Off-Road Compression Ignition Engine Standards (California Code of Regulations Title 13, Section 2423). If CARB adopts future emissions standards that exceed the Tier 4 requirement, the emissions standards resulting in the lowest ROG, NO_X, PM_{10}, and $PM_{2.5}$ emissions shall apply.
2. As non-diesel-fueled emergency generator technology becomes commercially available, and subject to the review and approval of the North County Fire Authority for safety purposes, non-diesel-fueled generators shall be installed in new buildings, provided that alternative fuels used in generators, such as electricity, hydrogen fuel cell, biodiesel,

[197] South Coast AQMD Rule 1113 is required for the Baylands since it is more stringent than current BAAQMD requirements.

renewable diesel, natural gas, or other biofuels or other non-diesel emergency power systems, are demonstrated to reduce ROG, NO_X, PM_{10}, and $PM_{2.5}$ emissions compared to diesel fuel.

3. For each new diesel backup generator permit submitted to air district for the proposed project, the backup generator applicant shall submit the anticipated location and engine specifications to the Brisbane Community Development Director for review and approval prior to issuance of a permit for the generator. Once operational, all diesel backup generators shall be maintained in good working order for the life of the equipment, and any future replacement of the diesel backup generators must be consistent with the original generator's engine emissions specifications. The operator of the facility at which the generator is located shall maintain records of the testing schedule and emergency operations for each diesel backup generator for the life of that diesel backup generator and shall provide this information for review to the Brisbane Community Development Director within three months of requesting such information.

These features shall be submitted to the Brisbane Community Development Director for review and approval and shall be included on the project drawings submitted for the construction-related permit(s) or on other documentation submitted to the Brisbane Community Development Director prior to the issuance of any building permits.

MM AQ-1i: **Promote Use of Low-VOC Consumer Products.** To reduce ROG emissions associated with the project, the project sponsor shall provide education for residential and commercial tenants concerning low-VOC consumer products. Prior to receipt of any certificate of occupancy, the project sponsor shall develop electronic correspondence to be distributed by email annually and upon any new lease signing to residential and/or commercial tenants of each building within the Specific Plan area that encourages the purchase of consumer products that generate lower than typical VOC emissions.

MM AQ-1j: **Operational Truck Emissions Reduction.** The following measures shall be incorporated into the building design and construction contracts (as applicable) to reduce ROG, NO_X, PM_{10}, and $PM_{2.5}$ emissions associated with operational on-road trucks, along with the potential health risk caused by exposure to toxic air contaminants from operational on-road trucks.

1. Equip all truck delivery bays with electrical hook-ups for diesel trucks at loading docks to accommodate plug-in electric truck transport refrigeration units (TRUs) or auxiliary power units during project operations.

2. Provide a notice on each commercial or office lease or building sale within the Baylands requesting businesses operating their own fleet of truck transport refrigeration units to exclusively use TRUs and auxiliary power units that are electric plug-in capable and trucks that use advanced exhaust technology (e.g., hybrid) or alternative fuels within the Baylands.
3. Prohibit diesel-powered TRUs from operating at loading docks for more than thirty minutes, and post signs at each loading dock presenting this TRU time limit.
4. All loading docks that are on a commercial property and can accommodate trucks with TRUs shall be equipped with electric vehicle (EV) charging equipment for heavy-duty trucks. This measure does not apply to temporary street parking for loading or unloading.
5. Prohibit trucks from idling for more than 2 minutes, and post "no idling" signs at the site entry point, at all loading locations, and throughout the Specific Plan area.

These features shall be submitted to the Brisbane Community Development Director for review and approval prior to the issuance of building permits and shall be included on the project drawings submitted for the construction-related permit or on other documentation submitted to the lead agency. ROG, NO_X, PM_{10}, and $PM_{2.5}$ emissions from project-related operational diesel trucks shall be reduced by implementing the following measures.

MM AQ-1k: **Electric Vehicle Charging Infrastructure.** Prior to building permit issuance for any site-specific development project that includes off-street parking, the applicant for such development shall demonstrate compliance with the most current California Green Building Standards (CALGreen Code) Tier 2 voluntary electric vehicle (EV) charging requirements or the mandatory requirements of the most recently adopted version of the City of Brisbane building code, whichever is more stringent. The installation of all EV charging equipment shall be included on the project drawings submitted for the construction-related permit(s) or on other documentation submitted to the City.

MM AQ-1l: **Electric Landscaping Equipment.** To reduce ROG, NO_X, PM_{10}, and $PM_{2.5}$ emissions associated with the project, only electric landscaping equipment shall be used within the Specific Plan area. No landscaping equipment powered by gasoline, diesel, propane, or other fossil fuels shall be used. The project applicant shall incorporate this requirement into the project design and tenant contracts (as applicable).

Significance Conclusion for Impact AQ-1 with Implementation of All Mitigation Measures

With implementation of Mitigation Measures MM AQ-1a through MM AQ-1c, MM AQ-1e, and MM AQ-1f, construction NO_X emissions would be reduced, but not below the significance thresholds, as shown in **Table 4.9-12** and **Table 4.9-13**. See Appendix G3 for detailed mitigated emissions calculations.

Mitigation Measures MM AQ-1a through MM AQ-1c and MM AQ-1e would reduce ROG, NO_X, PM_{10}, and $PM_{2.5}$ emissions due to cleaner engine technology, and MM AQ-1d would reduce ROG emissions from architectural coating during construction by using lower VOC paints. Mitigation Measure MM AQ-1f would reduce ROG, NO_X, PM_{10}, and $PM_{2.5}$ emissions due to reduction of heavy truck trips for transport of excavated soil. Mitigation measures MM AQ-1g through MM AQ-1l would reduce operational emissions of ROG, NO_X, PM_{10}, and $PM_{2.5}$ for Phase 1 development and full Specific Plan buildout; however, emissions of all criteria pollutants would still exceed significance thresholds after mitigation. Impacts for construction, operations, and combined construction and operational would, therefore, be significant and unavoidable.

Health Implications of Significant Impacts Related to Emissions of Ozone Precursors

Federal and state air quality standards have been set at levels considered safe to protect public health, including the health of sensitive populations such as asthmatics, children, and the elderly with a margin of safety, and to protect public welfare, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings. As explained by CARB, "An air quality standard defines the maximum amount of a pollutant averaged over a specified period of time that can be present in outdoor air without any harmful effects on people or the environment" (CARB 2023b). That is, if a region is compliant with the ambient air quality standards, its regional air quality can be considered protective of public health. The national air quality standards are statutorily required to be set by the USEPA at levels that are "requisite to protect the public health."[198]

Modeling for a health impact assessment of Baylands criteria pollutant emissions impacts ("Friant Ranch" type of analysis) would have limitations linking ozone precursor emissions to specific health outcomes. Because of the relatively small amount of emissions that would be generated by Baylands development, existing modeling tools would not link predicted changes in ozone and $PM_{2.5}$ concentrations associated with project operations to any specific *individual* health impact. Consequently, modeling in an attempt to determine how the project's ROG and NO_X emissions, and their contribution to ozone concentrations would affect health outcomes, would not yield meaningful or conclusive results, especially given the quantity of the ROG and NO_X emissions generated by the proposed project.

[198] 42 *U.S. Code* Chapter 7409, National primary and secondary ambient air quality standards, accessed July 3, 2023, https://www.law.cornell.edu/uscode/text/42/7409.

Table 4.9-12: Mitigated Net Increase in Criteria Air Pollutant Emissions During Construction and Operation

Year	Average Daily Construction Criteria Pollutant Emissions (pounds/day) [a]				Net New Operational Criteria Pollutant Emissions (pounds/day) [a]				Average Daily Construction and Net New Interim Operational Criteria Pollutant Emissions (pounds/day) [a]			
	ROG	NO_X	PM_{10}	$PM_{2.5}$	ROG	NO_X	PM_{10}	$PM_{2.5}$	ROG	NO_X	PM_{10}	$PM_{2.5}$
First year of Phase 1 construction	7.7	**103.2**	2.3	2.3	—	—	—	—	7.7	**103.2**	2.3	2.3
Construction year with maximum NO_X emissions (year 2026)	8.4	**126.3**	2.1	2.1	—	—	—	—	—	—	—	—
Construction year with maximum PM_{10} and $PM_{2.5}$ emissions (year 2028)	12.0	**108.3**	2.7	2.7	—	—	—	—	—	—	—	—
Construction year with maximum ROG emissions (year 2033)	18.5	32.2	0.4	0.4	—	—	—	—	—	—	—	—
Phase 1 Buildout and Initial Phase 2 construction)	0.8	6.3	0.1	0.1	**278.8**	**93.5**	**239.1**	**60.8**	**279.6**	**99.8**	**239.2**	**60.9**
Full Buildout					**388.7**	**110.4**	**324.8**	**82.4**	**388.7**	**110.4**	**324.8**	**82.4**
Significance Threshold	**54**	**54**	**82**	**54**	**54**	**54**	**82**	**54**	**54**	**54**	**82**	**54**

ABBREVIATIONS: PM = particulate matter; $PM_{2.5}$ = PM less than 2.5 microns in diameter; PM_{10} = PM less than 10 microns in diameter; ROG = reactive organic gases; NO_X = nitrogen oxides

NOTES: **Bold values** = threshold exceedance

a. Emissions estimated using CalEEMod® version 2022.1 and EMFAC2021. Due to rounding, numbers in columns may not add to totals.

Table 4.9-13: Mitigated Operational Emissions, Completion of Phase 1, and Project Buildout

Emissions Source	Criteria Pollutant Emissions [a]							
	Annual Emissions (tons/year)				Average Daily Emissions (pounds/day) [b]			
	ROG	NO_X	PM_{10}	$PM_{2.5}$	ROG	NO_X	PM_{10}	$PM_{2.5}$
Phase 1								
Total Phase 1 Emissions	**50.7**	**16.0**	**42.7**	**10.9**	**278.0**	**87.2**	**233.8**	**59.5**
Significance Thresholds	**10**	**10**	**15**	**10**	**54**	**54**	**82**	**54**
Exceeds Thresholds?	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
Full Specific Plan Buildout								
Total Buildout Emissions	**70.9**	**20.2**	**59.3**	**15.0**	**388.7**	**110.4**	**324.8**	**82.4**
Significance Thresholds	**10**	**10**	**15**	**10**	**54**	**54**	**82**	**54**
Exceeds Thresholds?	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**

SOURCE: ESA, *Brisbane Baylands Air Quality Technical Report*, February 2025.

ABBREVIATIONS: CalEEMod = California Emissions Estimator Model; $PM_{2.5}$ = PM less than 2.5 microns in diameter; PM_{10} = PM less than 10 microns in diameter; ROG = reactive organic gases; NO_X = nitrogen oxides; PM = particulate matter

NOTES: **Bold values** = threshold exceedance

a Emissions estimated using methods consistent with CalEEMod version 2022.1 and EMFAC2021. Due to rounding, numbers in columns may not add to totals.

b Operational emissions shown represent activity and emissions across 365 days per year.

Instead, such an assessment would use studies that report *correlations* between health effects and exposure to ozone and $PM_{2.5}$ to estimate potential effects on the population in the modeling domain. While model outputs would provide seemingly precise values, it would be inappropriate to assume that these values give an exact understanding of the project's actual impacts. The uncertainty in such analyses is inherent and unavoidable, given all of the assumptions about meteorology, photochemical reactions, and other air basin characteristics described further below.

The modeling that would be needed to estimate the Baylands' contribution to ambient concentrations of pollutants would require assumptions for many variables related to the Specific Plan and its future development and the meteorological and other characteristics of the air basin into which pollutants would be emitted. All simulations of physical processes, whether ambient air concentrations or health effects from air pollution, have an associated level of uncertainty because of many simplifying assumptions. Each step in the modeling process, and each assumption incorporated into the model, adds a degree of uncertainty into the reported results, resulting from the usage of air pollutant emission estimates, ambient air concentration modeling, and health impact calculations using various health impact functions. The combination and compounding of the uncertainties from each step of the modeling analysis, in the context of the very small increments of change that are predicted, could result in large uncertainties (ESA 2020).

Nevertheless, the Specific Plan's ROG and NO_X emissions that exceed thresholds could contribute to new or exacerbated air quality violations in the air basin by contributing to more days of ozone exceedance or result in air quality index values that are unhealthy for sensitive groups and other populations. Ozone precursors from consumer products and mobile sources would occur within the Specific Plan area and on local roadways close to residential populations.

Per the *Sierra Club v. County of Fresno (Friant Ranch, L.P.)* (2018) California Supreme Court decision, it is not scientifically feasible at the time of drafting of this report to substantively connect this individual project's criteria pollutant impacts to likely health consequences. In its amicus brief in the case, the South Coast Air Quality Management District (SCAQMD) stated that "EIRs must generally quantify a project's pollutant emissions, but in some cases, it is not feasible to correlate these emissions to specific, quantifiable health impacts (e.g., premature mortality; hospital admissions)." In such cases, a general description of the adverse health impacts resulting from the pollutants at issue may be sufficient.

Human health impacts associated with criteria pollutants are analyzed and taken into consideration when the USEPA sets the NAAQS for each criteria pollutant (42 U.S.C. Section 7409(b)(1)). The health impact of a particular criteria pollutant is analyzed on a regional, not a facility level, based on how close the area is to complying with (attaining) the NAAQS.

In proposing a health risk type analysis for criteria air pollutants, it is important to understand how the relevant criteria pollutants (O_3 and PM) are formed, dispersed, and regulated. Ground level O_3 (smog) is not directly emitted into the air but is instead formed when precursor pollutants such as NO_X and ROG are emitted into the atmosphere and undergo complex chemical reactions in the process of sunlight. Once formed, O_3 can be transported long distances by wind. Because of the complexity of O_3 formation, a specific tonnage amount of NO_X or ROGs emitted in a particular area does not equate to a particular concentration of O_3 in that area. Even rural areas that have relatively low tonnages of emissions of NO_X or ROG can have high levels of O_3 concentrations simply due to wind transport. Conversely, areas that have substantially more NO_X and ROG emissions could experience lower concentrations of O_3 simply because sea breezes disperse the emissions (SJVAPCD 2007).

The disconnect between the tonnage of precursor pollutants and the concentration of O_3 formed is important, because it is not necessarily the tonnage of precursor pollutants that causes human health effects; rather, it is the concentration of resulting O_3 that causes these effects. The NAAQS, which are statutorily required to be set by USEPA at levels that are requisite to protect the public health, are established as concentrations of O_3 and not as tonnages of their precursor pollutants.

Health Consequences of O_3 and PM

Air pollution is a major public health concern, and the adverse health effects associated with air pollution are diverse. O_3 is a pungent, colorless, toxic gas with direct health effects on humans, including respiratory and eye irritation and possible changes in lung functions. Groups most sensitive to O_3 include children, the elderly, persons with respiratory disorders, and people who exercise strenuously outdoors. PM_{10} and $PM_{2.5}$ can damage health by interfering with the body's mechanisms for clearing the respiratory tract or by acting as carriers of an absorbed toxic substance.

The adverse effects reported with short-term O_3 exposure are greater with increased activity because activity increases the breathing rate and the volume of air reaching the lungs, resulting in an increased amount of O_3 reaching the lungs. Children may be a particularly vulnerable population to air pollution effects because they spend more time outdoors, are generally more active, and have a higher ventilation rate than adults. A number of adverse health effects associated with ambient O_3 levels and PM levels have been identified from laboratory and epidemiological studies. These include increased respiratory symptoms, damage to cells of the respiratory tract, decreases in lung function, increased susceptibility to respiratory infection, and increased risk of hospitalization.

The Children's Health Study, conducted by researchers at the University of Southern California, followed a cohort of children who lived in 12 communities in southern California with differing levels of air pollution for several years. A publication from this study found that school absences in fourth graders for respiratory illnesses were associated with ambient O_3 levels and 24-hour PM_{10} values. An increase of 20 parts per billion of O_3 was associated with an 83 percent increase in illness-related absence rates, and a change of 10 micrograms per meter in PM was associated with a 5.7 percent increase in illness-related absences (Gilliland et al. 2004). In addition, long-term exposure to elevated levels of PM can affect acute response to O_3. The number of hospital admissions and emergency room visits for all respiratory causes (infections, respiratory failure, chronic bronchitis, etc.), including asthma, show a consistent increase as ambient O_3 levels increase in a community. These excess hospital admissions and emergency room visits are observed when hourly O_3 concentrations are as low as 0.08 to 0.10 ppm.

Numerous recent studies have found positive associations between increases in O_3 levels and excess risk of mortality. These associations persist even when other variables including season and levels of PM are accounted for. This indicates that O_3 mortality effects are independent of other pollutants (Bell et al. 2004). Several population-based studies suggest that asthmatics are more adversely affected by ambient O_3 levels, as evidenced by increased hospitalizations and emergency room visits. Laboratory studies have attempted to compare the degree of lung function change seen in age and gender-matched healthy individuals versus asthmatics and those with chronic obstructive pulmonary disease. While the degree of change evidenced did not differ significantly, that finding may not accurately reflect the true impact of exposure on

these respiration-compromised individuals. Since the respiration-compromised group may have lower lung function to begin with, the same degree of change may represent a substantially greater adverse effect overall.

A publication from the Children's Health Study focused on children and outdoor exercise. In communities with high O_3 concentrations, the relative risk of developing asthma in children playing three or more sports was found to be over three times higher than in children playing no sports (McConnell et al. 2002). These findings indicate that new cases of asthma in children are associated with heavy exercise in communities with high levels of O_3. The susceptibility to O_3 observed under ambient conditions could be due to the combination of pollutants that coexist in the atmosphere or O_3 may actually sensitize these subgroups to the effects of other pollutants. A study of birth outcomes in southern California found an increased risk for birth defects in the aortic and pulmonary arteries associated with O_3 and PM exposure in the second month of pregnancy (Ritz et al. 2008). In summary, acute adverse effects associated with O_3 exposures have been well documented, although the specific causal mechanism is still somewhat unclear. Additional research efforts are required to evaluate the long-term effects of air pollution and to determine the role of O_3 in influencing chronic effects.

The evidence linking these effects to air pollutants is derived from population based observational and field studies (epidemiological) as well as controlled laboratory studies involving human subjects and animals. There have been an increasing number of studies focusing on the mechanisms (that is, on learning how specific organs, cell types, and biochemicals are involved in the human body's response to air pollution) and specific pollutants responsible for individual effects. Yet the underlying biological pathways for these effects are not always clearly understood. Although individuals inhale pollutants as a mixture under ambient conditions, the regulatory framework and the control measures developed are mostly pollutant-specific. This is appropriate, in that different pollutants usually differ in their sources, their times and places of occurrence, the kinds of health effects they may cause, and their overall levels of health risk. Different pollutants, when acting together, may sometimes harm health more than they would when they are acting separately. Nevertheless, as a practical matter, health scientists, as well as regulatory officials, usually must deal with one pollutant at a time in determining health effects and in adopting air quality standards. To meet the air quality standards, comprehensive plans are developed such as the BAAQMD's 2017 Clean Air Plan.

Conclusions

Consistent with the California Supreme Court's Friant Ranch decision, the above information provides additional details regarding the potential health effects from the project's significant and unavoidable criteria pollutant emissions. It also explains why it is not scientifically feasible at the time of drafting of this report to substantively connect this individual project's criteria pollutant impacts to likely health consequences so that the public may make informed decisions regarding the costs and benefits of the proposed project.

b. Threshold AQ-2: Exposure of Sensitive Receptors to Substantial Pollutant Concentrations

Methodology for Determining Significance

Health Risk – Excess Cancer Risk, Fine Particulate Matter ($PM_{2.5}$)

A health risk assessment (HRA) was conducted to estimate health risks from exposure to TACs emitted by Specific Plan construction and operations. The health risk assessment focused on the TACs of concern from construction activities ($PM_{2.5}$ and DPM) because these pollutants pose substantial health impacts at the local level more so than other types of TACs.

If the Specific Plan would contribute TAC emissions resulting in increased health risk values or annual average $PM_{2.5}$ concentration contributions exceeding identified thresholds at the maximally exposed individual residence (MEIR), school receptor, or maximally exposed individual worker (MEIW), the Specific Plan would have a significant impact.

The HRA was prepared using technical information and health risk assessment guidance and protocols from the BAAQMD (BAAQMD 2016), CARB (CARB 2020), and the Office of Environmental Health Hazard Assessment (OEHHA) (OEHHA 2015). For construction, the health risk assessment evaluated the estimated incremental increase in:

- Lifetime cancer risk from exposure to emissions of DPM; and
- The annual average $PM_{2.5}$ concentrations associated with fuel combustion, construction site fugitive dust from earthmoving and ground-disturbing activities, and on-road fugitive sources (including tire wear, brake wear, and road dust) that would be emitted by Specific Plan-related construction activities.

For operations, the Health Risk Assessment included diesel particulate emissions from emergency backup generators, speciated toxic air contaminants in total organic gas emissions from gasoline-fueled passenger vehicles, and $PM_{2.5}$ from entrained road dust.

Pollutant concentrations were estimated using the American Meteorological Society/ Environmental Protection Agency Regulatory Model Improvement Committee regulatory air dispersion model (AERMOD version 22112) (USEPA 2016b). Consistent with air district HRA guidance, health risks (cancer risk and acute and chronic hazard index [HI]) from construction and operational DPM and operational total organic gases (TOGs), and annual average $PM_{2.5}$ concentrations associated with construction and operational activities, were estimated at all sensitive receptors and worker receptors located within 1,000 feet of the Baylands boundary. See Appendix A of the *Health Risk Assessment Technical Report* (EIR Appendix G2) for detailed calculations.

Receptor Exposure Assessment

Figure 4.9-3 shows the existing residential (sensitive receptors) and commercial/retail land uses (worker receptors) that were modeled in the HRA. There are no existing childcare or school receptors within 1,000 feet of the project boundary. The following receptor types were included in the HRA:

A. **Existing off-site receptors**

1. **Residents** to the west of Bayshore Boulevard from Geneva Avenue north to Wilde Avenue, and between Tunnel Avenue and US 101, including two blocks of residential streets just south of Lathrop Avenue, between Wheeler and Tocoloma avenues (near Little Hollywood park).
2. **Workers** (employees) at the commercial and retail businesses west of Bayshore Boulevard, north of Geneva Avenue. The San Francisco Municipal Transportation Agency office is adjacent to Bayshore Boulevard to the west.

   Additional workers modeled were employees at:

   - Commercial and retail businesses west of Bayshore between Guadalupe Canyon Parkway and Valley Drive.
   - Commercial and industrial sites east of Tunnel Avenue and both sides of Beatty Avenue. These include (but are not limited to) Recology, P&F Distributors, Transdev, and Golden State Building Materials.

B. New on-site receptors (within the Baylands)

1. **Residents** in the Roundhouse and Bayshore districts;
2. **Workers** (employees) in the low-density commercial areas east of the Caltrain right-of-way, the mid-density commercial areas of the Icehouse Hill district, and in the high-density commercial areas in the Bayshore district, just west of the Caltrain right-of-way; and
3. **School students** at the new middle school in the northwest corner of the Icehouse Hill district.[199]

TAC emissions and exposure to sensitive receptors would vary across the estimated 17-year construction period. Initially, existing sensitive receptors west of Bayshore Boulevard would be exposed only to construction emissions from construction activities on the west side. As construction of each block of the Icehouse Hill, Roundhouse, and Bayshore districts is

[199] Day care facilities are identified as a permitted use within large portions of the Specific Plan area. Because the specific locations of such uses within the Baylands cannot be known at this time, they are not addressed specifically as day care facilities. However, to ensure the maximum impact was captured, the analysis modeled potential future day care receptor locations as residential receptors. This is conservative because children are assumed to be present at residences and for more of the year than what is assumed for a day care.

completed and occupied, new on-site sensitive receptors would be exposed to ongoing construction of the remaining blocks, in addition to operational emissions (mobile sources and generators) from newly built blocks.

In addition, existing and new sensitive receptors would be exposed to construction emissions from Phase 2 development of low-density commercial uses in the Campus East District. Construction of the solar farm would take place at a distance greater than 1,000 feet from the closest Phase 1 residents, so there would not be substantial exposure to those residents from solar farm construction-related TACs. Nevertheless, its construction was included in the analysis.

Minimum Efficiency Reporting Value 13 Air Filtration

To comply with the California Energy Code, Title 24, Part 6 (CEC 2022) Baylands development must install a mechanical ventilation system at all residential and school buildings capable of achieving protection from particulate matter ($PM_{2.5}$) equivalent to that associated with a MERV 13 filtration (as defined by American Society of Heating, Refrigerating, and Air-Conditioning Engineers [ASHRAE] Standard 52.2). In addition, an ongoing maintenance plan for the building's heating, ventilation, and air conditioning (HVAC) air filtration system is required. Health risks for residential and school receptors evaluated in the project's HRA were estimated assuming the implementation of MERV 13 filters[200] in all residential and school receptor locations.

MERV 13 filters are required to be installed in new homes built on the Baylands per the 2022 California Energy Code. Consequently, it was conservatively assumed that MERV 13 filters would reduce the total exposure of new on-site receptors to DPM and $PM_{2.5}$ concentrations by 60 percent.

For assessing impacts to existing off-site receptors and new on-site sensitive receptors from construction and operational TAC emissions, exposure is assumed to begin to a fetus at the beginning of the third trimester at the start of construction until age 30. Sensitive receptors analyzed include residents and students. Off-site worker receptors were also analyzed in the HRA. TAC emissions and sensitive receptor exposures would vary across the 17-year-long construction period. Therefore, multiple exposure scenarios were evaluated to capture the period of maximum impact on each existing off-site receptor and each new on-site sensitive receptor.

Exposure assessment guidance from the BAAQMD assumes that people in residences would be exposed to air pollution 24 hours per day, 350 days per year, for 30 years as the basis for calculating cancer risk in HRAs. Students assumed to be exposed for 8 hours per day, 5 days

[200] MERV 13 filters have a removal efficiency of 90 percent for particles ranging from 1 to 3 microns and less than 75 percent for particles ranging from 0.3 to 1 micron.

per week, for a total of 9 years. Off-site workers were assumed to be exposed for 8 hours per day, 260 days per year, for a total of 25 years.

The exposure rate for the residential receptors is generally more conservative than those for other sensitive receptor types (i.e., schoolchildren, children in childcare, and patients) because residents have the highest exposure frequency, exposure time, and exposure duration.[201] Thus, the air pollutant exposure to residents typically results in the greatest adverse health outcome for all population groups and receptor types. The HRA also presents a highly conservative assessment because the typical resident spends more than 15 days away from the residence during the year, which was not factored into the exposure estimates.

TAC exposure and resulting health risks were quantified for existing off-site and new on-site (Baylands) residents and schools, along with existing off-site and new, on-site (Baylands) worker, or employee, locations, using three exposure scenarios to determine the MEIR location for residences and MEIW for workers. Three scenarios are needed to identify the sensitive receptor location(s) where maximum health risk values would occur, because TAC emissions vary substantially with each year of construction and operation.

The analysis was conducted assuming a worst-case exposure start date of 2025, which represents the assumed start of site grading and construction. A worst-case exposure start date represents the highest impact of construction emissions on the more sensitive age groups of the third trimester fetus to age two. Therefore, a receptor that starts their exposure in a different year would experience different health risks, based on the amount of construction equipment in use, haul truck trips nearby, etc., during each year. Three exposure analysis scenarios were analyzed in the HRA, including:

- **Exposure Analysis for Off-Site Receptors—Construction and On-Site Operations.** This analysis evaluates impacts to off-site receptors (residents and workers) within 1,000 feet of the Specific Plan boundary for the 30-year period following the start of construction. Consistent with OEHHA guidance, the residential cancer risk analysis for off-site receptors starts by assuming that a fetus in their third trimester could be present when construction begins for Phase 1 (OEHHA 2015). For residential cancer risk, the exposure to Baylands construction and operations emissions over the 30-year period starting with the start of construction was analyzed (assumed to be 2025–2055).
- **Exposure Analysis for On-Site Receptors—Construction and On-Site Operations.** As phased development of the Baylands continues, receptors would begin living and working within the Baylands while construction is still underway. This analysis scenario thus evaluates impacts to new on-site Baylands receptors (residents, employees, and middle school students) who would be present after construction of the initial increments

[201] For example, residents are assumed to be exposed for 30 years, as compared to a child in childcare who is assumed to be exposed for 6 years; resident children are assumed to be exposed 24 hours a day, 7 days a week, as compared to a childcare child, who is assumed to be exposed 8 hours a day, 5 days a week.

of development when buildings are occupied. For on-site receptors, the analysis assumes that a fetus in their third trimester would be present at a newly constructed residence within the Baylands when construction of remaining project blocks is ongoing. This would occur throughout the construction duration as each block is constructed. Thus, on-site receptors could be exposed to these ongoing construction emissions plus operational emissions for a total exposure of 30 years beginning as early as 2029. For Baylands workers at new commercial development, this exposure duration is 25 years. For the new middle school, the exposure duration was conservatively assumed to be 9 years. For acute HI, chronic HI, and annual average $PM_{2.5}$ concentrations, the maximum annual values for each Scenario 2 on-site receptor location were identified.

- **Exposure Analysis: Off-Site and On-Site Receptors—Operations at Full Specific Plan Buildout.** Analysis of operational impacts starting at full Specific Plan buildout, which is assumed to occur starting in 2043 includes all existing off-site receptors within 1,000 of the Baylands, all residents and workers within the Baylands, and students at the middle school within the site. The residential cancer risk analysis assumes exposure starts in 2043 to a fetus in their third trimester and would continue for 30 years (assumed to be 2043–2072). This analysis represents a full 30-year operational exposure to document lifetime exposure of residents to full Specific Plan buildout emissions once construction is complete. For the new middle school, exposure is conservatively assumed for nine years, consistent with the schoolchild exposure duration. Worker receptor exposure duration is assumed to be 25 years. For acute HI, chronic HI, and annual average $PM_{2.5}$ concentrations, the maximum annual values for each Scenario 3 off-site and on-site receptor location were identified.

Health Risk Calculations

Cancer Risk

The Baylands HRA evaluated the incremental increase in lifetime cancer risk from exposure to both construction and operational TAC emissions. These lifetime "excess" cancer risks were estimated as the upper-bound incremental probability that an individual would develop cancer over a lifetime as a direct result of exposure to potential carcinogens.

The estimated risk is expressed as a probability. The cancer risk of a specific chemical was calculated by multiplying the chemical intake or dose from human inhalation by the chemical's cancer potency factor. The incremental increase in lifetime cancer risk is based on DPM and $PM_{2.5}$ emissions from construction sources (off-road diesel construction equipment and on-road diesel hauling trucks) and DPM, $PM_{2.5}$, and speciated TOG from operational sources (diesel emergency generators and diesel and gasoline passenger vehicles). For operational traffic, speciated TOG emissions were included for gasoline vehicles, including from running exhaust; fugitive fuel vapor sources, including running loss processes; and fugitive $PM_{2.5}$, including tire wear, brake wear, and entrained road dust. Under California regulatory guidelines, DPM is

used as a surrogate measure of exposure for the mixture of chemicals that make up diesel exhaust as a whole. This analysis was based on the surrogate approach for DPM emissions, as recommended by OEHHA.

Lifetime excess cancer risk from exposure to DPM occurs exclusively through inhalation, so only the inhalation pathway was considered in the HRA. Speciated TOG emissions from gasoline combustion were also assessed through the inhalation pathway. Estimated lifetime excess cancer risks were calculated using the sensitivity factors and breathing rates recommended by OEHHA.

For the purposes of the HRA, all off-site and on-site residents, including both adults and children, were assumed to be present at one location for 30 years, consistent with OEHHA guidance. Exposure assessment for schools followed OEHHA and BAAQMD guidance and methods (BAAQMD 2016). The duration of exposure for schools is dependent on the age range of the students; for example, for a kindergarten to sixth grade school, exposure duration could be up to 8 years. This analysis conservatively assumed 9 years.

Chronic and Acute Health Impacts

The non-cancer effects of chronic (i.e., long-term) and acute, short-term exposure to DPM and speciated TOG emissions were evaluated using the hazard index (HI) approach, consistent with OEHHA guidance. The chronic HI is calculated by dividing the modeled annual average concentration at a receptor by the reference exposure level. The acute HI is calculated by dividing the modeled hourly average concentration at a receptor by the REL. The REL is the concentration at or below which no adverse health effects are anticipated.

RELs for DPM and speciated TOGs were obtained from OEHHA and the BAAQMD. For example, OEHHA has recommended an ambient concentration of 5 $\mu g/m^3$ as the chronic inhalation REL for DPM exhaust. Acute and chronic inhalation RELs for TACs from tailpipe and evaporative TOG emissions were based on the air district's weighted toxicity calculation methods and the latest data in CARB's Hotspots Analysis and Reporting Program database (CARB 2019).

Annual Average $PM_{2.5}$ Concentrations

The HRA also analyzed annual average $PM_{2.5}$ concentrations resulting from both construction and operational emissions. $PM_{2.5}$ concentrations include both fugitive and exhaust $PM_{2.5}$ emissions. The modeling evaluated the annual average concentration from all sources for each year of project construction and operation at each receptor location. The $PM_{2.5}$ annual concentration presented is the highest annual year for the MEIR and MEIW locations.

Cumulative Health Risk Assessment Impacts

A cumulative analysis was completed for the MEIRs and MEIWs under all three scenarios and is presented in Chapter 7, *Cumulative Environmental Effects*. The cumulative analysis evaluates modeled Specific Plan-generated health risks with that from existing, nearby sources of TAC emissions, including all BAAQMD-permitted stationary sources, roadways with more than 10,000 vehicles per day, the Caltrain rail line, and any other major source of emissions within 1,000 feet of the Specific Plan area (BAAQMD 2024b).

Carbon Monoxide Concentrations

Unlike other criteria air pollutants, whose effects are regional, CO impacts are evaluated locally. The BAAQMD recommends intersection-specific modeling of CO concentrations only for intersections where traffic volumes would exceed 44,000 vehicles per hour (24,000 vehicles per hour where vertical and/or horizontal air mixing is limited), based on modeling of vehicle emissions demonstrating that CO concentrations at intersections with traffic below this screening threshold would not exceed the state's 1-hour or 8-hour CO air quality standards.

Impact Assessment

Health Risk – Excess Cancer Risk, Acute and Chronic HI, and Fine Particulate Matter ($PM_{2.5}$)

Table 4.9-14 through **Table 4.9-16** present the increased lifetime excess cancer risk probability that would result from Baylands development, while **Table 4.9-17** presents the acute and chronic HI and annual average $PM_{2.5}$ concentrations. **Table 4.9-14** shows the Specific Plan's contribution to total cancer risk at existing off-site residents and workers over a 30-year period (25-year period for workers) that includes:

- Construction impacts of Baylands construction (assumed to be 2025–2042).
- Operations impacts following buildout of western portion of the Baylands (Phase 1) through completion of the eastern portion of the Baylands (assumed to be 2038–2042).
- Operations impacts following full Specific Plan buildout though the end of the 30-year exposure period for residential receptors (assumed to be 2043–2055).[202]
- Construction and operational impacts of the full 30-year residential exposure period starting at the beginning of site construction (assumed to be 2025–2055).[203]

The cancer risk for existing off-site receptors would exceed the significance threshold at the MEIR, which is a residence located west of Bayshore Boulevard, north of MacDonald Avenue. The cancer

[202] For workers, the exposure period of 25 years would extend 7 years following full Specific Plan buildout (assumed to be 2043–2050).

[203] For workers, the 25-year exposure period is assumed to be 2025–2050.

risk at the MEIW, located east of Tunnel Avenue, south of Esta Avenue, would not exceed significance thresholds. The primary contributor to the total cancer risk at these receptor locations is construction activities resulting in DPM emissions (which are highly carcinogenic) from diesel fuel combustion. In addition, the age range during which exposure of residential sensitive receptors to project emissions begins is the third trimester fetus to 2-year-old, which is the age when humans are most sensitive to TACs. The early phases of construction, i.e., the earthwork portions of the project, would produce high DPM emissions from the use of heavy-duty off-road equipment and therefore impact those most sensitive age categories and drive the risk at the off-site MEIR.

Table 4.9-15 shows the same breakdown of contributions to total cancer risk over a 30-year period for new residential and worker receptors within the Baylands. Significance thresholds for cancer risk for on-site receptors would not be exceeded at Baylands MEIR or MEIW. The MEIR is located in the Roundhouse, and the MEIW is located at the water recycling facility. The major contributor to the total cancer risk for resident and school receptors is construction and the age at which exposure begins. For Baylands workers, the majority of the health risk is from nearby emergency backup generators. The closest generator to a worker receptor would occur at the water recycling facility.

Table 4.9-16 shows the cancer risks at both existing off-site residential and worker receptors along with new Baylands residential, school, and worker receptors. The exposure period presented in Table 4.9-14 for residents is the 30-year period beginning at full Specific Plan buildout, assumed to start in 2043 and continue through 2073, while the exposure period for workers is 25 years, assumed to start in 2043 and continue through 2068. The exposure period for the middle school is 9 years.

For the buildout analysis in **Table 4.9-16**, the cancer risk threshold would not be exceeded at any off-site receptors. The cancer risk would be exceeded at the on-site MEIR and school receptor due to emergency backup generator DPM emissions. For the middle school receptor, the closest generator would be located at the commercial buildings within the Icehouse Hill District. The generators nearest to residents would be located within high density residential buildings along both sides of Geneva Avenue west of the Caltrain right-of-way. The MEIR would be in the high density residential area along the north side of Geneva Avenue west of the Caltrain right-of-way, and the on-site school receptor would be at the middle school.

Table 4.9-17 presents the acute, chronic, and annual average $PM_{2.5}$ concentrations at both existing off-site residential and worker receptors along with new Baylands residential, school, and worker receptors. The acute, chronic, and annual average $PM_{2.5}$ thresholds would not be exceeded at any resident or school for either the existing or new Baylands receptor types. The worker receptors would have no exceedances of acute or chronic risk. However, the existing off-site MEIW is located west of Tunnel Avenue, south of Esta Avenue, and would experience an annual average $PM_{2.5}$ concentration above the applicable threshold during construction, primarily due to fugitive dust emissions that occur during site grading.

Carbon Monoxide Concentrations

The maximum peak-hour traffic volume at the intersections analyzed in the Baylands transportation study (Appendix F.1) would be 3,580 vehicles per hour at the Geneva Avenue extension and Harney Way under 2040 cumulative conditions (Fehr & Peers 2023). Because the Specific Plan would not contribute traffic to an intersection exceeding applicable CO concentration screening criteria, Baylands development would not cause or contribute to an exceedance of the state's 1-hour or 8-hour CO standards.

Table 4.9-14: Cancer Risk to Existing Off-Site Receptors from Baylands Construction and On-Site Operations

Receptor Type/Emissions Source	Assumed Exposure Period	Cancer Risk (in 1 million)
Maximally Exposed Individual Residence – Off-Site Resident Child Receptor – west of Bayshore Blvd., north of MacDonald Ave.		
Specific Plan Construction	2025–2042	**16.0** [a]
Specific Plan Operations, Phase 1	2038–2042	0.4
Project Operations, full Specific Plan buildout	2043–2055	0.5
Project Construction + Operations	2025–2055	**16.9** [a]
Significance Threshold		**10.0**
Exceeds Threshold?		**Yes**
Maximally Exposed Individual Worker – Off-Site Worker Receptor – east of Tunnel Ave. and south of Esta Ave.		
Specific Plan Construction	2025–2042	4.7
Specific Plan Operations, Phase 1	2038–2042	0.8
Project Operations, full Specific Plan buildout	2043–2050	1.7
Project Construction + Operations	2025–2050	7.0
Significance Threshold		**10.0**
Exceeds Threshold?		**No**

SOURCE: ESA, *Brisbane Baylands Air Quality Technical Report*, February 2025.

ABBREVIATIONS: $\mu g/m^3$ = micrograms per cubic meter; HI = Hazard Index; NA = not applicable; $PM_{2.5}$ = particulate matter 2.5 microns or less in diameter

NOTES:

a. **Bold values** = threshold exceedance.

Table 4.9-15: Cancer Risk to Future On-Site Receptors from Baylands Construction and On-Site Operations

Receptor Type/Emissions Source	Assumed Exposure Period	Cancer Risk[a] (in 1 million) [b]
Maximally Exposed Individual Residence – Baylands Resident Child Receptor – north side of Main Street, at the approximate mid-point between Bayshore Boulevard and the Caltrain right-of-way		
Specific Plan Construction	2028–2042	5.1
Specific Plan Operations, Phase 1	2038–2042	0.6
Project Operations, full Specific Plan buildout	2043–2058	0.3
Project Construction + Operations	2028–2058	5.8
Significance Threshold		**10.0**
Exceeds Threshold?		**No**
School – Baylands Middle/High School Receptor [b] – southeast corner of Bayshore Boulevard and Main Street		
Specific Plan Construction	2029–2038	4.9
Specific Plan Operations, Phase 1	2038–2038	0.1
Project Operations, full Specific Plan buildout	NA	NA
Project Construction + Operations	2029–2038	5.0
Significance Threshold		**10.0**
Exceeds Threshold?		No
Maximally Exposed Individual Worker – Baylands Worker Receptor – Baylands water recycling facility		
Specific Plan Construction	2028–2042	0.5
Specific Plan Operations, Phase 1	2038–2042	0.6
Specific Plan Operational, full Specific Plan buildout	2043–2053	1.3
Specific Plan Construction + Operations	2034–2053	2.4
Significance Threshold		**10.0**
Exceeds Threshold?		No

SOURCE: ESA, *Brisbane Baylands Air Quality Technical Report*, February 2025.

ABBREVIATIONS: $\mu g/m^3$ = micrograms per cubic meter; HI = Hazard Index; MEIR = Maximally Exposed Individual Resident; MEIW = Maximally Exposed Individual Worker; $PM_{2.5}$ = particulate matter 2.5 microns or less in diameter; NA = not applicable

NOTES:

a. The exposure duration of the school receptor is 9 years. Exposure starting in 2029 would end in 2038, prior to full buildout operations of the project in 2043.
b. **Bold values** = threshold exceedance.

Table 4.9-16: Cancer Risk to Existing Off-Site and Future On-Site Receptors from Operation of the Baylands Specific Plan at Full Buildout

Receptor Type/Emissions Source	Assumed Exposure Period	Cancer Risk (in 1 million) [a]
Maximally Exposed Individual Residence – Off-Site Resident Child Receptor – west of Bayshore Blvd., along Macdonald Ave.		
Project Operations, full Specific Plan buildout	2043–2073	7.3
Significance Threshold		**10.0**
Exceeds Threshold?		No
Maximally Exposed Individual Worker – Off-Site Worker Receptor – east of Tunnel Ave. and south of Beatty Ave.		
Project Operational, full buildout	2043–2068	8.8
Significance Threshold		**10.0**
Exceeds Threshold?		No
Maximally Exposed Individual Residence – Baylands Resident Child Receptor – high-density residential area north of Geneva Avenue, west of the Caltrain right-of-way		
Project Operational, full buildout	2043–2073	**13.0**
Significance Threshold		**10.0**
Exceeds Threshold?		**Yes**
School – Baylands Middle/High School Receptor – southeast corner of Bayshore Boulevard and Main Street		
Project Operational, full buildout	2043–2052	**13.0**
Significance Threshold		**10.0**
Exceeds Threshold?		**Yes**
Maximally Exposed Individual Worker – Baylands Worker Receptor – south of Geneva Avenue west of Sierra Point Parkway		
Project Operational, full buildout	2043–2068	9.2
Significance Threshold		**10.0**
Exceeds Threshold?		No

SOURCE: ESA, *Brisbane Baylands Air Quality Technical Report*, February 2025.

ABBREVIATIONS: $\mu g/m^3$ = micrograms per cubic meter; HI = Hazard Index; MEIR = Maximally Exposed Individual Resident; MEIW = Maximally Exposed Individual Worker; $PM_{2.5}$ = particulate matter 2.5 microns or less in diameter

NOTES:

a. **Bold values** = threshold exceedance.

Table 4.9-17: Acute Hazard Index, Chronic Hazard Index, and Annual Average $PM_{2.5}$ Concentration

Impact Description	Receptor Type and Location	Acute Hazard Index [a]	Chronic Hazard Index [a]	Annual Average $PM_{2.5}$ Concentration ($\mu g/m^3$) [a]
Maximally Exposed Individual Residence – Resident Child Receptors [b]				
Specific Plan Construction and Operations – Existing Off-Site Receptor Exposure from start of construction through buildout (assumed to occur 2025–2042)	**MEIR:** West of Bayshore Blvd., north of MacDonald Ave.	**NA**	0.01	0.15
Specific Plan Construction and Operations – Future On-Site Receptor Exposure from start of construction through buildout (assumed to occur 2025–2042)	**Chronic MEIR:** South of Geneva Ave., west of the Caltrain right-of-way. **$PM_{2.5}$ MEIR:** West of the Caltrain right-of-way, south of the Chronic MEIR.	NA	0.01	0.04
Specific Plan Operations, Full Specific Plan Buildout – Existing Off-Site Receptor Exposure starting first year after Specific Plan buildout (assumed to occur 2043–2073)	**Chronic/$PM_{2.5}$ MEIR** is located at west of Bayshore Blvd., south of MacDonald Ave.	0.01	<0.01	0.22
Specific Plan Operations, Full Specific Plan Buildout – Future On-Site Receptor Exposure starting first year after Specific Plan buildout (assumed to occur 2043–2073)	**Acute MEIR:** West of Bayshore Blvd., north of Geneva Ave. **Chronic MEIR:** South of Geneva Ave., west of the Caltrain right-of-way. **$PM_{2.5}$ MEIR:** South of Geneva Ave., west of Sierra Point Pkwy.	0.01	0.01	0.26
Significance Threshold		**1.0**	**1.0**	**0.3**
Exceeds Threshold?		**No**	No	No
School Receptors				
Specific Plan Construction and Operation Exposure starting first year after Phase 1 buildout (assumed to occur 2029–2038)	**School Receptor:** South of Main St., east of Bayshore Blvd.	NA	<0.01	0.01
Specific Plan Construction and Operation Exposure starting first year after Specific Plan buildout (assumed to occur 2043–2052)	**School Receptor:** South of Main St., east of Bayshore Blvd.	**<0.01**	**<0.01**	**0.11**
Significance Threshold		**1.0**	**1.0**	**0.3**
Exceeds Threshold?		No	No	No
Maximally Exposed Individual Worker – Worker Receptors				
Specific Plan Construction and Operations – Existing Off-Site Receptor From start of construction through buildout (assumed to be 2025–2042)	**Chronic MEIW:** West of Tunnel Ave., south of Esta Ave. **$PM_{2.5}$ MEIW:** West of Tunnel Ave., south of Beatty Ave.	**NA**	0.06	0.26
Specific Plan Construction and Concurrent Operations – Future On-Site Receptor From start of construction through buildout (assumed to be 2025–2042)	**Chronic/$PM_{2.5}$ MEIW:** Water Recycling Facility.	**NA**	<0.01	**0.05**

Impact Description	Receptor Type and Location	Acute Hazard Index [a]	Chronic Hazard Index [a]	Annual Average $PM_{2.5}$ Concentration ($\mu g/m^3$) [a]
Specific Plan Operations, Full Buildout – Existing Off-Site Receptor Exposure starting first year after Specific Plan buildout (assumed to occur 2043–2052)	**Acute MEIW:** West of Bayshore Blvd., south of Geneva Ave. **Chronic/$PM_{2.5}$ MEIW:** West of Tunnel Ave., south of Beatty Ave.	**0.02**	0.01	**0.27**
Specific Plan Operations, Full Buildout – Future On-Site Receptor Exposure starting first year after Specific Plan buildout (assumed to occur 2043–2052)	**Acute/Chronic/$PM_{2.5}$ MEIW:** South of Geneva Ave., west of Sierra Point Parkway.	**0.01**	0.01	**0.26**
Significance Threshold		**1.0**	**1.0**	**0.3**
Exceeds Threshold?		No	No	No

SOURCE: ESA, *Brisbane Baylands Air Quality Technical Report*, February 2025.

ABBREVIATIONS: $\mu g/m^3$ = micrograms per cubic meter; HI = Hazard Index; MEIR = Maximally Exposed Individual Resident; MEIW = Maximally Exposed Individual Worker; NA = not applicable; $PM_{2.5}$ = particulate matter 2.5 microns or less in diameter

NOTES:

a. **Bold values** = threshold exceedance.
b. Hazard index values and annual average $PM_{2.5}$ concentrations represent the worst year of exposure, not a summation. Overlapping years of construction and operation have combined impacts.

Significance Conclusion for Impact AQ-2

DPM emitted during construction activities would result in an excess cancer risk level of up to 16.0 in one million during site grading (16.9 over a 30-year exposure period starting with initiation of construction activities), as shown in **Table 4.9-14**. DPM from operational activities would result in an excess cancer risk level of up to 13.0 in one million for on-site Baylands residents and the new middle school in the northwest corner of the Icehouse Hill district during the 30-year exposure period following Specific Plan buildout (**Table 4.9-16**). These values exceed applicable thresholds and represent significant impacts. Acute and chronic, non-cancer HI, and annual average $PM_{2.5}$ concentrations would not exceed significance thresholds (**Table 4.9-17**).

Recent Regulations Not Quantified in the Analysis

New regulations not quantified in the analysis (such as CARB's Advanced Clean Fleets regulation, as described above under Impact AQ-1) would reduce DPM from heavy diesel trucks. However, the effect of this reduction, although not quantified as part of the current modeling tools, is assumed not to be sufficient to reduce impacts to less than significant. Therefore, with adherence to existing regulations and new regulations, excess cancer risk probability would remain significant.

Program EIR Mitigation Measures

Impact AQ-1 mitigation measures MM AQ-1a Clean Off-Road Construction Equipment (Program EIR Mitigation Measure 4.B-2a), and MM AQ-1b Tier 3 Off-Road Construction Equipment (Program EIR Mitigation Measure 4.B-2b) would reduce DPM and exhaust $PM_{2.5}$ emissions along with fugitive $PM_{2.5}$ emissions thereby reducing health risks from construction and operation of the Specific Plan.

Significance Conclusion for Impact AQ-2 with Implementation of Program EIR Mitigation Measures

MM AQ-1c would reduce impacts from exposure to DPM, but the effect of this reduction was not quantified in the analysis, and the reduction may not be sufficient to reduce impacts to below significance thresholds. Therefore, with adherence to Mitigation Measures carried forward from the Program EIR and implementation of best management practices in required SWPPPs, excess cancer risk would be significant.

Additional Mitigation Measures

Mitigation Measures for Impact AQ-1, MM AQ-1c, Zero-Emission and Tier 4 Off-Road Construction Equipment; MM AQ-1e, Clean On-Road Construction Trucks; MM AQ-1f Conveyor System for Transport of Excavated Material; MM AQ-1h, Best Available Emissions Controls for Stationary Emergency Generators; MM AQ-1j, Operational Truck Emissions Reduction; MM AQ-1k, Electric Vehicle Charging Infrastructure; and MM AQ-1l, Electric Landscaping Equipment, would reduce DPM and exhaust $PM_{2.5}$ emissions along with fugitive $PM_{2.5}$ emissions thereby reducing health risks from construction and operation of the Specific Plan.

Significance Conclusion for Impact AQ-2 with Implementation of All Mitigation Measures

As discussed below, Impact AQ-2 would be less than significant with mitigation incorporated. The effectiveness of Mitigation Measure MM AQ-1c, Zero-Emission and Tier 4 Off-Road Construction Equipment, was quantified in the analysis and the results presented in **Table 4.9-18** through **Table 4.9-21**. Although Mitigation Measures MM AQ-1e, MM AQ-1f, MM AQ-1h, MM AQ-1j, and MM AQ-1l would further reduce the health risks, as described above, they were not used to calculate the mitigated emissions, because MM AQ-1c was sufficient to show a reduction to below the significance threshold. MM AQ-1k would reduce emissions mainly from gasoline-powered passenger vehicles, and MM AQ-1l would reduce emissions mainly from gasoline-powered landscaping equipment. These sources would contribute a negligible amount to health risks compared to the substantial contribution to health risk from DPM.

As shown in **Table 4.9-18** through **Table 4.9-21**, after implementation of mitigation measures, cancer risk thresholds are not exceeded at any off-site receptors.

As shown in **Table 4.9-18**, the MEIR cancer risk threshold exceedance for construction and concurrent Specific Plan operations was reduced to below the significance threshold with implementation of Mitigation Measure MM AQ-1c. See Appendix G3 for detailed mitigated health risk calculations. Implementation of this mitigation measure would reduce the DPM emissions for all construction phases. After mitigation, the Scenario 1 MEIR would be located east of Tunnel Avenue, north of Lathrop Avenue.

Table 4.9-18: Mitigated Cancer Risk to Existing Off-Site Receptors During Baylands Construction and On-Site Operations

Receptor Type/Emissions Source	Exposure Period	Excess Cancer Risk (in 1 million) [a,b]
Maximally Exposed Individual Residence – Off-Site Resident Child Receptor: east of Tunnel Ave., north of Lathrop Ave.		
Specific Plan Construction	2025–2042	4.8
Specific Plan Operations, Phase 1	2038–2042	0.1
Project Operations, full Specific Plan buildout	2043–2055	0.2
Project Construction + Operations	2025–2055	5.1
Significance Threshold		**10.0**
Threshold Exceeded?		**No**
Maximally Exposed Individual Worker – Off-Site Worker Receptor: east of Tunnel Ave., south of Beatty Ave.		
Specific Plan Construction	2025–2042	1.1
Specific Plan Operations, Phase 1	2038–2042	0.3
Project Operations, full Specific Plan buildout	2043–2050	0.6
Project Construction + Operations	2025–2050	2.0
Significance Threshold		**10.0**
Threshold Exceeded?		No

SOURCE: ESA, *Brisbane Baylands Air Quality Technical Report*, February 2025.

ABBREVIATIONS: $\mu g/m^3$ = micrograms per cubic meter; HI = Hazard Index; MEIR = Maximally Exposed Individual Resident; MEIW = Maximally Exposed Individual Worker; NA = not applicable; $PM_{2.5}$ = particulate matter 2.5 microns or less in diameter.

NOTES:

a. **Bold values** = threshold or exceedance.
b. Health risk values presented in this table include Tier 4 Final engines on all off-road equipment including emergency standby generators required for operations.

With implementation of previously identified mitigation measures, cancer risk values for on-site receptors while construction operations are underway in other portions of the Baylands would remain below the significance threshold for the on-site Baylands MEIR, which would be in the Bayshore District, and the MEIW which would still be at the water recycling facility.

With implementation of Mitigation Measure MM AQ-1c, the off-road construction equipment DPM emissions and the on-site fugitive dust would reduce the cancer risk and annual average

$PM_{2.5}$ concentration for off-site receptors below the respective significance thresholds at the MEIR and MEIW.

Mitigation Measure MM AQ-1h, which applies to all new Baylands stationary emergency diesel generators, would reduce operational DPM emissions below the cancer risk significance threshold for the Baylands MEIR and school receptor, as shown in **Table 4.9-19**.

Table 4.9-19: Mitigated Cancer Risk to Future On-Site Baylands Receptors from Baylands Construction and On-Site Operations

Receptor Type/Emissions Source	Exposure Period	Excess Cancer Risk (in 1 million) [a,b]
Maximally Exposed Individual Residence – Baylands Resident Child Receptor – low-density residential along north side of Geneva Avenue on both sides of Baylands Park		
Specific Plan Construction	2033–2042	1.7
Specific Plan Operations, Phase 1	2038–2042	0.4
Project Operations, full Specific Plan buildout	2043–2063	1.0
Project Construction + Operations	2033–2063	3.0
Significance Threshold		**10.0**
Threshold Exceeded?		No
School – Baylands Middle School Receptor [c] – east of Bayshore Blvd., south of Main Street		
Specific Plan Construction	2034–2038	1.4
Specific Plan Operations, Phase 1	2038–2038	<0.1
Project Operations, full Specific Plan buildout	NA	NA
Project Construction + Operations	2034–2038	1.5
Significance Threshold		**10.0**
Threshold Exceeded?		No
Maximally Exposed Individual Worker – Baylands Worker Receptor – water recycling facility		
Specific Plan Construction	2028–2042	0.2
Specific Plan Operations, Phase 1	2038–2042	0.1
Project Operations, full Specific Plan buildout	2043–2053	0.3
Project Construction + Operations	2028–2053	0.7
Significance Threshold		**10.0**
Threshold Exceeded?		No

SOURCE: ESA, *Brisbane Baylands Air Quality Technical Report*, February 2025.

ABBREVIATIONS: $\mu g/m^3$ = micrograms per cubic meter; HI = Hazard Index; MEIR = Maximally Exposed Individual Resident; MEIW = Maximally Exposed Individual Worker; NA = not applicable; $PM_{2.5}$ = particulate matter 2.5 microns or less in diameter.

NOTES:

a. **Bold values** = threshold or exceedance.
b. Health risk values presented in this table include Tier 4 Final engines on all off-road equipment including emergency standby generators required for operations.
c. The exposure duration of the school receptor is 9 years. Exposure starting in 2029 would end in 2038, prior to full buildout operations of the project in 2043.

After completion of construction, unmitigated project operations produced cancer risk impacts above the threshold for the Scenario 3 Baylands MEIR and school receptors. After the Specific

Plan is constructed and operations commence, implementation of Mitigation Measure MM AQ-1h would reduce the DPM emissions from on-site emergency generators. Health risk assessment modeling showed that the DPM emissions from the emergency generators would be the main contributors to the cancer risk impacts, at project full buildout, at the Bayshore MEIR and the school receptor. Mitigation Measure MM AQ-1h would reduce the modeled cancer risk at these receptors to below a level of significance. The mitigated cancer risk at the Bayshore MEIR and the school receptor would also be reduced to less than significant (**Table 4.9-20**).

Table 4.9-20: Mitigated Cancer Risk to Existing Off-site and Future On-Site Receptors from Operation of the Baylands Specific Plan at Full Buildout

Receptor Type/Emissions Source	Exposure Period	Excess Cancer Risk (in 1 million) [a,b]
Maximally Exposed Individual Residence – Off-Site Resident Child Receptor – west of Bayshore Blvd., north of Geneva Ave.		
Project Operational, full buildout	2043–2073	**4.5**
Significance Threshold		**10.0**
Threshold Exceeded?		No
Maximally Exposed Individual Worker – Off-Site Worker Receptor east of Tunnel Ave. and south of Beatty Ave.		
Project Operational, full buildout	2043–2068	**2.4**
Significance Threshold		**10.0**
Threshold Exceeded?		No
Maximally Exposed Individual Residence – Baylands Resident Child Receptor – MEIR for cancer risk located north of Geneva Ave., west of Caltrain		
Project Operational, full buildout	2043–2073	5.3
Significance Threshold		**10.0**
Threshold Exceeded?		No
School – Baylands Middle School Receptor – east of Bayshore Blvd., south of Main Street		
Project Operational, full buildout	2043–2052	4.9
Significance Threshold		**10.0**
Threshold Exceeded?		No
Maximally Exposed Individual Worker – Baylands Worker Receptor – south of Geneva Avenue, west of Sierra Point Pkwy.		
Project Operational, full buildout	2043–2068	**1.9**
Significance Threshold		**10.0**
Threshold Exceeded?		No

SOURCE: ESA, *Brisbane Baylands Air Quality Technical Report*, February 2025.

ABBREVIATIONS: $\mu g/m^3$ = micrograms per cubic meter; HI = Hazard Index; MEIR = Maximally Exposed Individual Resident; MEIW = Maximally Exposed Individual Worker; $PM_{2.5}$ = particulate matter 2.5 microns or less in diameter.

NOTES:

a. **Bold values** = threshold exceedance.
b. Health risk values presented in this table include Tier 4 Final engines on all off-road equipment including emergency standby generators required for operations.

Table 4.9-21 presents the mitigated results for acute HI, chronic HI, and annual average $PM_{2.5}$ concentrations. None of the results would exceed significance thresholds.

Table 4.9-21: Mitigated Acute Hazard Index, Chronic Hazard Index, and Annual Average $PM_{2.5}$ Concentration

Impact Description	Receptor Type and Location	Acute Hazard Index [a]	Chronic Hazard Index [a]	Annual Average $PM_{2.5}$ Concentration ($\mu g/m^3$) [a]
Maximally Exposed Individual Residence - Resident Child Receptor [b]				
Specific Plan Construction and Operations – Existing Off-Site Receptor Exposure from start of construction through buildout (assumed to occur 2025–2042)	**Chronic MEIR:** west of Tunnel Ave., south of Esta Ave. **$PM_{2.5}$ MEIR:** west of Tunnel Ave., south of Beatty Ave.	**NA**	<0.01	0.15
Specific Plan Construction and Operations – Future On-Site Receptor Exposure from start of construction through buildout (assumed to occur 2025–2042)	**MEIR:** South of Geneva Ave., west of Caltrain right-of-way	**NA**	<0.01	0.04
Specific Plan Operations, Full Specific Plan Buildout – Existing Off-Site Receptor Exposure starting first year after Specific Plan buildout (assumed to occur 2043–2073)	**Acute MEIR:** west of Bayshore Blvd., north of Geneva Ave. **Chronic MEIR:** west of Bayshore Blvd., north of Geneva Ave. **$PM_{2.5}$ MEIR:** west of Bayshore Blvd., north of Geneva Ave.	0.01	<0.01	0.22
Specific Plan Operations, Full Specific Plan Buildout - Future On-Site Receptor Exposure starting first year after Specific Plan buildout (assumed to occur 2043–2073)	**Acute MEIR:** east of Bayshore Blvd., south of Geneva Ave. **Chronic MEIR:** north of Geneva Ave., east of Baylands Park **$PM_{2.5}$ MEIR:** south of Geneva Ave., west of Sierra Point Pkwy.	0.01	<0.01	0.26
Significance Threshold		**1.0**	**1.0**	**0.3**
Thresholds Exceeded?		No	No	No
School Receptor [b]				
Specific Plan Construction and Operation Exposure starting first year after Phase 1 buildout (assumed to occur 2029–2038)	**School Receptor:** South of Main St., east of Bayshore Blvd.	**NA**	**<0.01**	**0.01**
Specific Plan Construction and Operation Exposure starting first year after Specific Plan buildout (assumed to occur 2043–2052)	**School Receptor:** South of Main St., east of Bayshore Blvd.	**<0.01**	**<0.01**	**0.11**
Significance Threshold		**1.0**	**1.0**	**0.3**
Thresholds Exceeded?		No	No	No
Maximally Exposed Individual Worker — Worker Receptor [b]				
Specific Plan Construction and Operations – Existing Off-Site Receptor From start of construction through buildout (assumed to be 2025–2042)	**Chronic MEIW:** west of Tunnel Ave., south of Esta Ave. **$PM_{2.5}$ MEIW:** west of Tunnel Ave., south of Beatty Ave.	**NA**	0.01	**0.26**
Specific Plan Construction and Concurrent Operations – Future On-Site Receptor From start of construction through buildout (assumed to be 2025–2042)	**MEIW:** Water Recycling Facility	**NA**	<0.01	**0.05**

Impact Description	Receptor Type and Location	Acute Hazard Index [a]	Chronic Hazard Index [a]	Annual Average $PM_{2.5}$ Concentration ($\mu g/m^3$) [a]
Specific Plan Operations, full buildout – Existing Off-Site Receptor Exposure starting first year after Specific Plan buildout (assumed to occur 2043–2052)	**Acute MEIW:** west of Bayshore Blvd., south of Geneva Ave. **Chronic/$PM_{2.5}$ MEIW:** west of Tunnel Ave., south of Beatty Ave.	**0.02**	0.01	**0.27**
Specific Plan Operations, full buildout – Future On-Site Receptor Exposure starting first year after Specific Plan buildout (assumed to occur 2043–2052)	**MEIW:** South of Geneva Ave., west of Sierra Point Pkwy.	**0.01**	<0.01	**0.26**
Significance Threshold		**1.0**	**1.0**	**0.3**
Thresholds Exceeded?		No	No	No

SOURCE: ESA, *Brisbane Baylands Air Quality Technical Report*, February 2025.

ABBREVIATIONS: $\mu g/m^3$ = micrograms per cubic meter; HI = Hazard Index; MEIR = Maximally Exposed Individual Resident; MEIW = Maximally Exposed Individual Worker; NA = not applicable; $PM_{2.5}$ = particulate matter 2.5 microns or less in diameter.

NOTES:

a. **Bold values** = threshold or exceedance.
b. Hazard index values and annual average $PM_{2.5}$ concentrations represent the worst year of exposure, not a summation. Overlapping years of construction and operation have combined impacts.

After mitigation, the significance thresholds for cancer risk, annual average $PM_{2.5}$ concentrations, chronic, and acute HI would not be exceeded and therefore, the impact would be less than significant with mitigation incorporated.

c. Threshold AQ-3: Odors

Methodology for Determining Significance

The approach to analyzing potential odor impacts is qualitative. Generally, construction of a project would involve temporary odors from diesel combustion in equipment and vehicles. For operational odor impacts, if the proposed project would include one of the types of facilities that typically involve odorous emissions, there would be the potential for an odor impact, especially if near sensitive receptors.

Sources that typically generate odors include wastewater treatment and pumping facilities; landfills, transfer stations, and composting facilities; petroleum refineries, asphalt batch plants, chemical (including fiberglass) manufacturing, and metal smelters; painting and coating operations; rendering plants; coffee roasters and food processing facilities; and animal feed lots and dairies (BAAQMD 2022b). The analysis addresses the potential for the Specific Plan to introduce or expand of any of these odor-generating uses.

Impact Assessment

Construction

The use of construction equipment within the Specific Plan area could create objectionable odors to nearby properties or residents/employees within the Specific Plan area. Construction-related odors would be localized and temporary, and the use of low-VOC surface coating materials in accordance with BAAQMD Rules would reduce potentially objectionable odors from painting operations.

Operations – Water Recycling Facility

Construction of the Baylands water recycling facility (WRF), including a wastewater recycling facility designed to treat raw sewage and produce disinfected tertiary recycled water conforming to the State of California Administrative Code of Regulations Title 22, is anticipated to occur at the initiation of Phase 1 development and would thus be operational as residential uses are being developed and occupied. The WRF is described in detail in Section 3.3.2 g, *On- and Off-Site Infrastructure*.

Daily operations of the water recycling facility could generate objectionable odors to nearby sensitive receptors. The water recycling facility would be located east of the Icehouse Hill commercial development district, across the Caltrain right-of-way, approximately 500 feet downwind from the closest residential receptor in the Roundhouse District. The closest off-site residents would be located approximately 2,000 feet west of the facility. Nevertheless, the facility could generate odors that would adversely affect residents and workers within and adjacent to the Baylands.

Operations – Other Sources

In addition, food preparation at restaurants and hotels, as well as small-scale coffee roasting within the Baylands, both of which are permitted by the Specific Plan, could result in odor generation. Such odors would be small scale. BAAQMD regulation 7 places general limitations on odorous substances and specific emission limitations on certain odorous compounds.

Significance Conclusion for Impact AQ-3

Because construction-related odors from diesel equipment and vehicles would be localized and temporary, and low-VOC surface coating materials in accordance with BAAQMD rules would reduce potentially objectionable odors from painting operations, construction activities (including the use of diesel and surface coating materials) would be less than significant.

The large majority of uses that would be permitted by the Specific Plan would not generate objectionable odors. While food preparation at restaurants and hotels, as well as coffee roasting

within the Baylands, both of which are permitted by the Specific Plan, could result in odor generation, such odors would be generated on a small scale and not have a substantial adverse effect on a substantial number of people, as would be demonstrated by the required monitoring of BAAQMD regulation 7 for any odor complaints.

Daily operations of the water recycling facility could result in objectionable odors to nearby sensitive receptors. The water recycling facility, which is proposed on the east side of the Caltrain right-of-way, would be located approximately 500 feet from the closest residential receptor in the Roundhouse District. The closest off-site residents would be located approximately 2,000 feet west of the facility. The odor impact of water recycling facility operations would therefore be significant.

Program EIR Mitigation Measures

MM AQ-3a: Recycled Water Plant Odor Management Plan (Program EIR Measure 4.B-8). Prior to the start of operation pursuant to issuance of a permit to operate from the RWQCB, the recycled water plant shall formulate and implement a progressive Odor Management Plan for review and comment by the BAAQMD prior to review and approval by the City. The Odor Management Plan shall select a sufficient number of control measures from the following menu of options identified by the BAAQMD to attain a performance standard which meets the odor detection thresholds of BAAQMD Regulation 7 as achieved and verified by the BAAQMD inspector.

i. Activated carbon filter/carbon absorption
ii. Biofiltration/bio trickling filters
iii. Fine bubble aerator
iv. Hooded enclosures
v. Wet and dry scrubbers
vi. Caustic and hypochlorite chemical scrubbers
vii. Ammonia scrubber
viii. Energy efficient blower system
ix. Thermal oxidizer
x. Capping/covering storage basins and anaerobic ponds
xi. Mixed flow exhaust
xii. Wastewater circulation technology
xiii. Exhaust stack and vent location with respect to receptors

Significance Conclusion for Impact AQ-3 with Implementation of Program EIR Mitigation Measures

With implementation of MM AQ-3a, impacts would remain significant because the water recycling facility would be twice the size of the facility analyzed in the Program EIR.

Additional Mitigation Measures

MM AQ-3b: **Odor Control System.** The water recycling facility shall install sufficient odor controls to manage objectionable odors in compliance with BAAQMD Regulation 7 and meet the performance standard set forth in Section 7-302 of that regulation, which reads:

> "**7-302 Limit on Odorous Substances at or Beyond Property Line:** A person shall not discharge any odorous substance which causes the ambient air at or beyond the property line of such person to be odorous and to remain odorous after dilution with four parts of odor-free air."

To control odors, wastewater processing tanks/structures shall be enclosed and/or covered, and under negative pressure, and provided with positive ventilation through an odor control system such as a two-stage process that involves a biological trickling filter followed by granular activated carbon.

MM AQ-3c: **Hydrogen Sulfide and Odor Management Program for the WRF.** Prior to construction of the WRF, the project applicant shall develop a Hydrogen Sulfide and Odor Management program (HSOM Program) at the WRF for review and approval by the Community Development Director. The HSOM Program shall address hydrogen sulfide and odor management using a performance-based approach designed to meet the regulatory ambient air concentrations established in BAAQMD Regulation 9, Rule 2, (i.e., 0.06 ppm averaged over three consecutive minutes, or 0.03 ppm averaged over any 60 consecutive minutes) and to limit public complaints. The HSOM Program shall include best management practices and emissions controls as follows:

1. For grit and screenings, refuse containers shall be odor proof and contained within an area draining to the sanitary sewer.
2. Primary screenings shall be housed in a ventilated enclosure at the WRF(s).
3. Carbon absorption, biofiltration, or ammonia scrubbers shall be installed at the WRF(s).
4. Ferrous chloride injection for hydrogen sulfide removal may also be installed and implemented if necessary.

The project applicant shall implement the HSOM Program on an ongoing basis and provide the Directors or the Directors' designees with an annual report to describe implementation of the program and any adjustments needed to improve performance.

The HSOM Program shall address odor complaints that occur over time and shall designate WRF staff to receive and respond to complaints. The name and contact information of the responsible WRF staff shall be posted in a noticeable location on each WRF facility. The performance standard for odors shall be based on a three-tier threshold based on 30-day, 90-day, and three-year averaging times for complaints. The performance standards that must be met shall be as follows:

1. Three or more violation notices for public nuisance related to odors issued by the BAAQMD within a 30-day period;
2. Odor complaints from ten or more complainants within a 90-day period; or
3. Five or more confirmed odor complaints per year averaged over three years as an indication of a significant odor impact from a facility.

If one or more of these standards are not met, the project applicant shall revise the program and make any necessary improvement to the WRF odor controls to achieve all performance standards in subsequent reporting years.

MM AQ-3d: **Future Recordkeeping.** The new odor control units proposed as part of the WRF would also be subject to recordkeeping requirements and conditions in the BAAQMD's Permit to Operate for the purpose of abating any public nuisance from odors. The recordkeeping shall log all citizen complaints received by the BAAQMD. If citizen complaints exceed 10 or more within a 90-day period (per BAAQMD Regulation 7), additional odor controls would be required.

Significant Conclusion for Impact AQ-3 with Implementation of All Mitigation Measures

Implementation of mitigation measures would establish performance standards for water recycling facility operations, require installation of an odor control system, and mandate adherence to best management practices. Because of the odor controls required by Mitigation Measure MM AQ-3a through MM AQ-3d, the water recycling facility would not emit odors detectable at or beyond the property line of the facility. Because of the odor controls required by Mitigation Measure MM AQ-3a through MM AQ-3d, the water recycling facility would not emit odors detectable at or beyond the property line of the facility. Impacts would be reduced such that Impact AQ-3 would be less than significant with mitigation incorporated.

d. Threshold AQ-4: Consistency with the San Francisco Bay Area Clean Air Plan

Methodology for Determining Significance

The methodology for determining consistency with the Bay Area Clean Air Plan follows the recommendation of the BAAQMD to address the following three questions.

1. **Does the project support the primary goals of the Clean Air Plan?** In determining consistency with the 2017 Clean Air Plan, this analysis considers whether the proposed project would support the primary goals of the 2017 Clean Air Plan, include applicable control measures from the 2017 Clean Air Plan, and avoid disrupting or hindering implementation of control measures identified in the 2017 Clean Air Plan. In addition, a qualitative assessment is undertaken as to whether the Specific Plan would support achieving equity among Bay Area communities in cancer health risk from toxic air contaminants.
2. **Does the project include applicable control measures from the Clean Air Plan?** Next, an evaluation is undertaken to determine whether each applicable air quality plan control measure has been incorporated into the Specific Plan or can feasibly be incorporated into the mitigation measures. The BAAQMD recommends that projects incorporate all feasible air quality plan control measures that are applicable to the project.
3. **Does the project disrupt or hinder implementation of any Clean Air Plan control measures?** An evaluation is undertaken to determine whether the Specific Plan would cause disruption, delay, or otherwise hinder the implementation of any air quality plan control measure, such as precluding or hindering extension of transit services or a bicycle path or proposing excessive parking beyond parking requirements (BAAQMD 2017).

Impact Assessment

The legislature explained in SB 743 that, "there is a need to balance the need for level of service standards for traffic with the need to build infill housing and mixed-use commercial developments within walking distance to mass transit facilities, downtowns, and town centers and to provide greater flexibility to local governments to balance these sometimes-competing interests." Similarly, the State has adopted findings, "California has a housing supply and affordability crisis of historic proportions. The consequences of failing to effectively and aggressively confront this crisis are hurting millions of Californians, robbing future generations of the chance to call California home, stifling economic opportunities for workers and businesses, worsening poverty and homelessness, and undermining the state's environmental and climate objectives" (Gov. Code § 65589.5(a)(2)). "Among the consequences of those actions are discrimination against low-income and minority households, lack of housing to support

employment growth, imbalance in jobs and housing, reduced mobility, urban sprawl, excessive commuting, *and air quality deterioration*" (Gov. Code § 65589.5(a)(1)(C)).

The proposed project would include the development of residential and commercial development in transit priority areas. The Baylands site has also been expressly called out for development in the City's Housing Element and Land Use Element. Population growth is anticipated throughout the Bay Area, and development of project sites with access to transit and a mix of uses furthers the goals of the 2017 Clean Air Plan. The proposed project would be consistent with the primary goals of the 2017 Clean Air Plan.

The 2017 Clean Air Plan recognizes that to a great extent, community design dictates individual travel mode, and that a key long-term control strategy to reduce emissions of criteria pollutants, air toxics, and greenhouse gases from motor vehicles is to channel future Bay Area growth into urban communities where goods and services are close at hand, and people have a range of viable transportation options.

Transportation control measures that are identified in the 2017 Clean Air Plan are also implemented by the Baylands Specific Plan. The infill nature of the proposed project and high availability of viable transportation options ensure that residents and employees of the commercial and office uses could bicycle, walk, and ride transit to and from the Specific Plan area instead of taking trips via private automobile. Additionally, the Specific Plan would implement Transportation Demand Management (TDM) measures, as described in the Traffic Impact Analysis, to reduce vehicle trips.

As discussed under Impact AQ-1, buildout of the Specific Plan would result in a net increase in operational emissions of criteria air pollutants that would exceed significance thresholds, even after implementation of mitigation. This would result in a significant and unavoidable impact regarding regional criteria air pollutant emissions. However, these emissions do not in and of themselves indicate a conflict with the 2017 Clean Air Plan given the Specific Plan's emphasis on reducing VMT, reducing energy demand, encouraging smart land use and building design, and achieving other objectives.

For the reasons described above, implementation of the Specific Plan would not interfere with, disrupt, or hinder implementation of the Clean Air Plan. Therefore, this impact would be less than significant, and no mitigation is required. Nevertheless, mitigation measures that are required for Impact AQ-1 would further assist the goals of consistency with the Clean Air Plan.

The 2017 Clean Air Plan recommends 85 specific control measures and actions. Other measures in the plan but outside of the BAAQMD's regulatory authority may be advisory or are otherwise not specifically applicable to land use projects. These control strategies are grouped into the following categories:

- Stationary source measures
- Transportation control measures
- Energy control measures
- Building control measures
- Agricultural control measures
- Natural and working lands control measures
- Waste management control measures
- Water control measures
- Super GHG control measures

Many of these control measures address stationary sources and would be implemented by the BAAQMD using its permit authority and therefore are not suited for implementation through local planning efforts or project approval actions. The control measures most applicable to the Specific Plan are transportation control measures and energy and climate control measures. The proposed project's impact with respect to GHGs is discussed in the Greenhouse Gas Emissions technical report.

The following control measures from the 2017 Clean Air Plan (**Table 4.9-22**) would be implemented by the Specific Plan.

Significance Conclusion for Impact AQ-4

The Specific Plan would support the primary goals of the 2017 Clean Air Plan because it is a mixed-use, transit-oriented development generating and using sustainable energy for residential, commercial, and other uses. In addition, the Specific Plan includes many of the control measures from the 2017 Clean Air Plan, as shown in **Table 4.9-22**. This impact would be less than significant.

Table 4.9-22: Project Consistency with Applicable Control Measures of the 2017 Clean Air Plan

Control Measure	Measure Description	Existing or Proposed Implementation Mechanism
SS25 – Coatings, Solvents, Lubricants, Sealants and Adhesives	SS25 would reduce emissions of ROG from architectural coatings and other materials by proposing more stringent ROG limits as appropriate.	The proposed project would comply with the BAAQMD regulatory limits for architectural coatings.
SS32 – Emergency Backup Generators	S32 would reduce emissions of DPM, TACs, and criteria pollutants from emergency backup generators by enforcing Rule 11-18, resulting in reduced health risks to impacted individuals. This measure would also have climate protection benefits through reduced GHG emissions.	The proposed project would comply with BAAQMD BACT requirements, which state that all new diesel backup generators shall meet Tier 4 Final standards.
TR7 – Safe Routes to Schools and Safe Routes to Transit	TR7 would facilitate safe routes to schools and transit by providing funds and working with transportation agencies, local governments, schools, and communities to implement safe access for pedestrians and cyclists. Likely projects would include implementation of youth outreach and educational programs to encourage walking and cycling, the construction of bicycle facilities and improvements to pedestrian facilities.	The proposed project would prioritize pedestrian and bicycle access and implement measures to encourage alternative modes of transportation by building a dense, walkable, mixed-use, transit-oriented development, and prioritizing safety, especially for bicyclists and pedestrians. In addition, a fare-free shuttle network would be provided to transport Baylands residents and workers throughout the site and connect the Baylands to downtown Brisbane and existing transit routes.
TR9 – Bicycle and Pedestrian Access and Facilities	The bicycle component of TR9 strives to expand bicycle facilities serving employment sites, educational and cultural facilities, residential areas, shopping districts, and other activity centers. Typical improvements include bike lanes, routes, paths, and bicycle parking facilities. The bicycle component also includes a bike share pilot project that was developed to assess the feasibility of bicycle sharing as a first- and last-mile transit option. The pedestrian component of this measure is intended to improve pedestrian facilities and encourage walking by funding projects that improve pedestrian access to transit, employment sites, and major activity centers. Improvements may include sidewalks/paths, benches, reduced street width and intersection turning radii, crosswalks with activated signals, curb extensions/bulbs, buffers between sidewalks and traffic lanes, and street trees.	The proposed project would be consistent with this measure by its pedestrian network improvements and separated bicycle paths in the roadway network.

Control Measure	Measure Description	Existing or Proposed Implementation Mechanism
TR10 – Land Use Strategies	This measure supports land use patterns that reduce vehicle miles traveled (VMT) and associated emissions and exposure to TACs, especially within infill locations and impacted communities.	The Baylands Specific Plan proposes a mix of commercial, residential, retail, and recreational uses in a transit-served location. A network of pedestrian and bicycle routes are proposed that connect to regional systems. The Specific Plan proposes electric vehicle (EV) charging infrastructure, a fare-free shuttle system, secure bike parking, and other features to reduce automobile use and fossil fuel consumption. Transportation demand management programs with a target of reducing automobile travel by 16.4 percent are proposed as part of the project (Fehr & Peers 2023).
TR13 – Parking Policies	This control measure outlines how the MTC and the BAAQMD, in cooperation with regional agency partners, would (1) take actions at the regional level to implement parking policies that would benefit air quality, and (2) encourage and support local agency parking policies to reduce motor vehicle travel and promote focused growth.	The Baylands Specific Plan establishes a maximum number of permitted parking spaces to encourage use of transit and non-motorized travel, as well as to reduce the presence of automobiles within the Baylands.
TR22 – Construction, Freight and Farming Equipment	TR22 directs the BAAQMD to work to reduce emissions from off-road equipment used in the construction, freight handling and farming industries by pursuing the following strategies: (1) offering financial incentives between 2017 and 2030 to retrofit engines with diesel particulate filters or upgrade to equipment with electric or Tier 4 off-road engines; (2) work with the air board, the California Energy Commission, and others to develop more fuel-efficient off-road engines and drive trains; and (3) work with local communities to encourage use of renewable electricity and fuels.	Most Bay Area construction equipment currently meets Tier 4 Final standards for all construction equipment greater than 25 hp.[204]
TR23 – Lawn Care Equipment	TR23 directs the BAAQMD to seek funding to expand the Commercial Lawn and Garden Equipment Replacement Program into all nine Bay Area counties.	The proposed project would comply with CARB and BAAQMD requirements.

[204] Construction industry experts in the Bay Area indicate that 75 to 90 percent of construction equipment used in the region consist of Tier 4 engines, and large construction companies like those to be contracted for the Specific Plan have construction fleets with 90 to 95 percent Tier 4 engines (Guadalupe Quarry Redevelopment Project Draft Environmental Impact Report, AQ and GHG technical report, August 2024, available at *https://ceqanet.opr.ca.gov/2022060358/2*. Accessed January 9, 2025.

Control Measure	Measure Description	Existing or Proposed Implementation Mechanism
EN1 – Decarbonize Electricity Production	EN1 focuses on lowering carbon emissions by switching the fuel sources used in electricity generation. The measure would promote and expedite a transition away from fossil fuels used in electricity generation (i.e., natural gas) to a greater reliance on renewable energy sources (e.g., wind, solar). In addition, this measure would promote an increase in cogeneration, which results in useful heat in addition to electricity generation from a single fuel source.	A minimum of 85,000 megawatt-hours (MWh) of electricity annually are proposed to be generated by on-site solar panels installed on buildings and in parking areas, and in a solar farm developed east of the Caltrain right-of-way south of Visitacion Creek. The Specific Plan provides for five additional sustainable infrastructure subareas (along with rooftops and parking lot areas) to accommodate additional electricity generation and storage technologies.
BL1 – Green Buildings	BL1 seeks to increase energy efficiency and the use of on-site renewable energy—as well as decarbonize existing end uses—for all types of existing and future buildings. The measure includes policy assistance, incentives, diffusion of public information, and targeted engagement and facilitation of partnerships in order to increase energy efficiency and on-site renewable energy in the buildings sector.	Carbon emissions reductions would be achieved through energy conservation and building efficiency measures and a combination of landscaping and lighting designs that reduce energy and water use and building design standards to reduce energy and water usage. In addition, the proposed project would install a solar farm and rooftop solar on many of the buildings.
BL4 – Urban Heat Island	This control measure aims to reduce the "urban heat island" phenomenon by increasing the application of "cool roofing" and "cool paving" technologies, as well as increasing the prevalence of urban forests and vegetation through voluntary approaches and educational outreach.	Approximately 29.5 percent of the Year 2100 land area within the Baylands would be retained in open space, park, trails, wetlands and habitat, and similar uses.[205] The Specific Plan also preserves the Brisbane Lagoon as open space and restores critical butterfly habitat. Although removal of wetlands would occur as part of site grading activities, the Specific Plan proposes establishment and maintenance in perpetuity of new wetlands within the Baylands. Further, new public parks and other amenities would be provided and maintained at no cost to existing city residents and businesses. Provision of cool roofs is permitted as a potential means of complying with CALGreen Tier 1 requirements. The Specific Plan requires reflective roof materials; however, such materials would generate substantial glare within Brisbane's hillside residential areas. Thus, EIR Mitigation Measure MM AES-5a (Program EIR Mitigation Measure 4.A-4b) prohibits placement of such reflective materials on building roofs.
NW2 – Urban Tree Planting	NW2 promotes the planting of trees in urbanized settings to take advantage of the myriad benefits provided by these trees, including shading to reduce both the "urban heat island" phenomenon and the need for space cooling, and the absorption of ambient criteria air pollutants as well as carbon dioxide.	The proposed project would include habitat restoration and tree planting. Habitat restoration and enhancement within the Ecological Park (Roundhouse District) include woodland areas that would have the highest canopy and include plantings of live oak, bay, buckeye, and hazelnut trees with an understory sharing many coastal scrub species.

[205] As shown in Table 3-1, 157 acres of the Baylands 494 acres of Year 2100 land area are proposed for open space uses.

Control Measure	Measure Description	Existing or Proposed Implementation Mechanism
WA3 – Green Waste Diversion; and WA4 – Recycling and Waste Reduction	WA3 seeks to reduce the total amount of green waste being disposed in landfills by supporting the diversion of green waste to other uses, while WA4 seeks to reduce greenhouse gas emissions by diverting recyclables and other materials from the landfill.	Baylands construction projects are proposed to recycle and/or salvage for re-use a minimum of sixty-five percent (65%) of nonhazardous construction and/or demolition waste and would reuse 100 percent of non-hazardous soils excavated during grading operations on-site. Operational solid waste reduction is proposed to consist of informational and technical assistance programs, installation, and use of pet waste collection systems, and zero waste programs implemented by Recology for the City and County of San Francisco.
WR2 – Support Water Conservation	WR2 seeks to promote water conservation, including reduced water consumption and increased on-site water recycling, in residential, commercial, and industrial buildings for the purpose of reducing greenhouse gas emissions.	Water conservation is required for indoor building use, and for outdoor landscaping. A dual water system providing for recycled water to be used for outdoor irrigation and designated indoor uses within commercial buildings would be constructed. Once the Project generates a wastewater flow of 0.22 million gallons per day (approximately 20% built out), a water recycling facility would be constructed and operational, at which time potable water would not be used for non-potable purposes.

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4.10 GREENHOUSE GAS EMISSIONS

4.10.1 INTRODUCTION

a. Overview

This section evaluates the physical environmental effects of the 2025 Specific Plan project in relation to greenhouse gas (GHG) emissions and whether the Specific Plan would conflict with applicable plans, policies, or regulations adopted for the purpose of reducing GHG emissions. The evaluation includes the technical analyses prepared by Environmental Science Associates (ESA) provided in Appendix H.

GHG emissions and resulting global climate change represent cumulative impacts from human activities and development projects locally, regionally, state-wide, nationally, and worldwide. No single project can generate enough GHG emissions to noticeably change the global average temperature; instead, the combination of GHG emissions from past, present, and future projects around the world have contributed and will continue to contribute to global climate change and its associated environmental impacts. This EIR's GHG emissions analysis thus addresses the Specific Plan's contribution to cumulative significant adverse environmental impacts of global climate change resulting from GHG emissions.

b. Definitions

Atmospheric lifetime describes how long it takes to restore the system to equilibrium after an increase in the concentration of a GHG in the atmosphere. Atmospheric lifetimes of GHGs range from tens to thousands of years.

Carbon dioxide equivalent is a metric measure used to compare the emissions from various GHGs based upon their global warming potential (GWP). Carbon dioxide equivalents are commonly expressed as "million metric tons of carbon dioxide equivalents ($MMTCO_2e$)." The carbon dioxide equivalent for a gas is derived by multiplying the tons of the gas by the associated GWP, as follows:

- $MTCO_2e$ = (metric tons of a gas) x (GWP of the gas)
- $MMTCO_2e$ = (million metric tons of a gas) x (GWP of the gas)

Carbon footprint refers to the total amount of GHG that is emitted into the atmosphere each year by a person, family, building, organization, or company. A person's carbon footprint includes GHG emissions from fuel that an individual burns directly, such as by heating a home or riding in a car. It also includes GHGs that come from producing the goods or services that

the individual uses, including emissions from power plants that make electricity, factories that make products, and landfills where trash is sent.

Carbon neutral means having or resulting in no net addition of carbon dioxide to the atmosphere.

Carbon sequestration is the process by which trees and plants absorb carbon dioxide, release the oxygen, and store the carbon.

Emissions inventory is an estimate of the amount of pollutants emitted into the atmosphere from major mobile, stationary, area-wide, and natural source categories over a specific period of time, such as a day or a year.

Global climate change is the observed increase in the average temperature of the Earth's atmosphere and oceans, along with other significant changes in climate (such as precipitation or wind) that last for an extended period of time. The term *global climate change* is often used interchangeably with the term *global warming*, but *global climate change* is preferred over *global warming* because it helps convey that GHG emissions may result in other changes in addition to rising temperatures.

Global warming potential (GWP) is a measure of how much heat a greenhouse gas traps in the atmosphere relative to the effects of carbon dioxide (CO_2) over a specific time period, allowing for comparisons of the warming potential of different gases. GWP allows for the conversion of different GHG emissions into the same emissions unit, carbon dioxide equivalence. (CO_2e).

Greenhouse gas (GHG) refers to gases that absorb and emit radiation within the thermal infrared range, which is the fundamental cause of human contribution to the greenhouse effect. The most prevalent GHG is carbon dioxide (CO_2), along with methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6).

Greenhouse effect is the warming effect of the Earth's atmosphere. Light energy from the sun that passes through the Earth's atmosphere is absorbed by the Earth's surface and is radiated into the atmosphere as heat energy. The heat energy is then trapped by the atmosphere, creating a situation similar to that which occurs in a car with its windows rolled up. The emission of CO_2 and other gases into the atmosphere increases the greenhouse effect and contributes to global warming.

Intergovernmental Panel on Climate Change (IPCC) is a scientific intergovernmental body set up by the World Meteorological Organization and the United Nations Environment Programme to provide decision-makers and others interested in climate change with an objective source of information about climate change.

Net zero GHG emissions refers to the emissions of GHGs such as carbon dioxide, methane, or nitrous oxide by a particular development or human activity being equal to or less than the

amount of GHGs that are removed from the atmosphere by that development or human activity (i.e., GHG emissions ≤ GHG reductions).

Troposphere is the zone of the atmosphere characterized by water vapor, weather, winds, and decreasing temperature with increasing altitude.

4.10.2 PHYSICAL ENVIRONMENTAL SETTING

Greenhouse gases trap heat in the atmosphere in a manner similar to the effect greenhouses have in raising the internal temperature. GHGs allow sunlight to enter the atmosphere while containing a portion of the outward-bound infrared radiation, which warms the air. Both natural processes and human activities emit GHGs. The natural accumulation of GHGs in the atmosphere regulates the earth's temperature; however, emissions from human activities such as fossil fuel–based electricity production and operation of internal combustion engines in motor vehicles have elevated the concentration of GHGs in the atmosphere. The resulting accumulation of GHGs has contributed to an increase in the temperature of the earth's atmosphere, commonly referred to as global climate change.

a. Climate Change Effects of Greenhouse Gases

The California Legislature and agencies charged with implementing state climate policy have determined that EIRs should focus on GHG emissions rather than attempt to catalogue all the potential global effects that may ultimately result from cumulative GHG emissions (14 Cal. Code Regs., §§ 15064.4, 15126.4, subd.[c], 15183.5). The Natural Resources Agency's statement of reasons for adopting the CEQA Guidelines amendments pursuant to SB 97 states: "[S]ome comments submitted to OPR during its public workshops indicated that the Guidelines should be addressed to 'Climate Change' rather than just the effects of GHG emissions. The focus in the Guidelines on GHG emissions is appropriate."]. Nevertheless, the discussion below provides an overview of the consequences of GHG emissions.

GHGs trap heat that enters Earth's atmosphere. As a result, radiation that otherwise would have escaped back into space is retained, resulting in a warming of the atmosphere. Scientists generally believe that emissions from human activities—such as electricity generation, vehicle emissions, and farming and forestry practices—have elevated the concentration of GHGs in the atmosphere beyond naturally occurring concentrations, contributing to the larger process of global climate change.

Although there are many GHGs, the following six are explicitly identified in California legislation as being of primary concern:

- **Carbon dioxide (CO_2)**, emitted as a result of fossil fuel combustion, with contributions from cement manufacturers and other sources.

- **Methane**, produced through the anaerobic decomposition of waste in landfills, production and distribution of natural gas and petroleum, animal digestion and decomposition of animal wastes,[206] coal production, and incomplete fossil fuel combustion.
- **Nitrous oxide**, typically generated as a result of soil cultivation practices, particularly the use of commercial and organic fertilizers, fossil fuel combustion, nitric acid production, and biomass burning.
- **Hydrofluorocarbons**, used primarily as refrigerants.
- **Perfluorocarbons**, originally introduced as alternatives to ozone-depleting substances and typically emitted as byproducts of industrial and manufacturing processes.
- **Sulfur hexafluoride**, used primarily in electrical transmission and distribution systems.

The primary GHGs anticipated from the 2025 Specific Plan project are CO_2 and methane as the result of combustion of fossil fuels from mobile sources.

Not all GHGs equally affect global climate change. As a result, GHG emissions are commonly quantified in units of their equivalent mass of carbon dioxide (CO_2e). CO_2e emissions are calculated by applying the appropriate global warming potential (GWP) value to pollutant-specific emissions.[207] GWP ranges from 1 (carbon dioxide) to 22,800 (sulfur hexafluoride). GHGs with a higher GWP have a greater global warming effect on an equivalent mass basis over a specified time frame. For example, over a 100-year time frame, one metric ton (MT) of methane has the same contribution to the greenhouse effect as approximately 25 MT of CO_2 and therefore has a GWP of 25.

b. Effects of Adding GHGs to the Atmosphere: Global Climate Change

Temperature Increase

The primary effect of adding GHGs to the atmosphere has been a rise in the average global temperature. In 2021, the average temperature in the contiguous United States was 54.5 degrees Fahrenheit (°F), which was 2.5°F above the 20th-century average and ranked as the fourth-warmest year in the preceding 127-year period of record. The six warmest years on record have all occurred since 2012, while the 10 warmest years have occurred over the past 12-year period.

[206] The State Scoping Plan indicates methane emissions from livestock, both from animals and their waste, to be a primarily component of agricultural greenhouse emissions.

[207] GWPs and associated CO_2e values were developed by the Intergovernmental Panel on Climate Change (IPCC) and initially published in its Second Assessment Report in 1996. The IPCC updated GWP values based on the latest science in its Fourth Assessment Report (AR4). CARB reports GHG emissions inventories for California using the GWP values from the IPCC AR4.

The Intergovernmental Panel on Climate Change's Fourth Assessment Report indicates that average temperatures in California could rise 5.6°F to 8.8°F by the end of the 21st century, depending on the global trajectory of GHG emissions. According to the Cal-Adapt website, the portion of the city of Brisbane in which the Baylands is located could experience an average temperature increase of about 3.6°F to 4.3°F by 2070–2090, compared to the 1961–1990 period.

With climate change, extreme heat conditions and heat waves are predicted to affect larger areas, to last longer, and to have higher temperatures. Heat waves, defined as three or more days with temperatures above 90°F, are projected to occur more frequently by the end of the century. Heat-related illness includes a spectrum of illnesses ranging from heat cramps to severe heat exhaustion and life-threatening heat stroke.

Wildfires

Wildfires in California over the past two decades have been increasing in size, severity, and adverse impacts. Warming temperatures that result from climate change influence the length of both the fire and growing seasons and consequently affect the amount of time and intensity at which fires burn and the amount of available fuels. Higher temperatures lead to drought, which decreases the fuel moisture and increases the likelihood of ignition. Increased wildfire activity leads to more GHG emissions from sources that otherwise would be carbon sinks. Between 2000 and 2019, GHG emissions from California wildfires ranged from a low of 1.2 $MMTCO_2e$ in 2010 to a high of 39 $MMTCO_2e$ in 2018, with an annual average of 14 $MMTCO_2e$. CARB estimates that wildfire emissions increased dramatically in 2020, totaling 112 $MMTCO_2e$.

Air Quality

Higher temperatures, conducive to air pollution formation, worsen air quality in California and make it more difficult for the state to achieve both national and state ambient air quality standards. Climate change may increase the concentration of ground-level ozone in particular, which can cause breathing problems; aggravate lung diseases such as asthma, emphysema, and chronic bronchitis; and cause chronic obstructive pulmonary disease. Emissions from wildfires can lead to excessive levels of particulate matter, ozone, and volatile organic compounds. The resulting increase in fine particulate matter from wildfires is a direct threat to human health even during relatively short exposures, particularly for children, the elderly, and people with existing respiratory problems (Kenward et al. 2013). Additionally, severe health effects accompanied by drier conditions and poor air quality could increase the number of heat-related deaths, illnesses, and asthma attacks throughout the state.

Water Supply and Water Quality

There is a high degree of uncertainty regarding the overall impact of global climate change on future water supplies in California. Studies indicate considerable variability in predicting

precise impacts of climate change on California hydrology and water resources. Increasing uncertainty in the timing and intensity of precipitation will challenge the operational flexibility of California's water management systems. Warmer, wetter winters would increase the amount of runoff available for groundwater recharge; however, this additional runoff could occur at a time when some basins either are being recharged at their maximum capacity or are already full. Conversely, reductions in spring runoff and higher evapotranspiration levels because of higher temperatures could reduce the amount of water available for recharge.

Climate change could alter water quality in a variety of ways, including through increases in winter flows that reduce pollutant concentrations (through dilution) or increase erosion of land surfaces and stream channels, leading to higher sediment, chemical, and nutrient loads in rivers. Water temperature increases and decreased water flows can result in increasing concentrations of pollutants and salinity. Increases in water temperature alone can lead to adverse changes in water quality, even in the absence of changes in precipitation.

Hydrology and Sea Level Rise

Climate change has the potential to affect the amount of snowfall, rainfall, and snowpack; the intensity and frequency of storms; flood hydrographs (flash floods, rain or snow events, and coincidental high-tide and high-runoff events); sea level rise and coastal flooding; coastal erosion; and the potential for saltwater intrusion (CNRA 2014). Refer to Section 4.14, *Hydrology and Water Quality*, for a discussion of impacts related to sea level rise.

Agriculture

Many of California's important crops, including fruit and nut trees, are particularly vulnerable to changing temperature regimes and water-induced stress. California agriculture is projected to experience lower crop yields as a result of extreme heat waves, heat stress and increased water needs of crops and livestock (particularly during dry and warm years), and new and changing pest and disease threats. Higher CO_2 levels can stimulate plant production and increase plants' water use efficiency. However, if temperatures rise and drier conditions prevail, water demand could increase; crop yield could be threatened by a less reliable water supply; and greater ozone pollution could render plants more susceptible to pest and disease outbreaks and interfere with plant growth.

Historically, California has experienced multi-year droughts and has been able to support agricultural water demands through groundwater reserves, winter snowpack, reservoir storage, and conveyance of water throughout the state in canals. However, the higher temperatures that come with climate change will likely decrease snow storage, will cause more frequent and severe droughts, and will require additional preparedness for more frequent surface water shortages and reliance on sustainable groundwater management.

Ecosystems and Wildlife

Changes in temperature, precipitation, food sources, competition for prey, and other physical or biological features of the habitat may force changes in the timing of key life-cycle events for plants and animals and shift the ranges where these plants and animals live. Range shifts have been observed in approximately 75 percent of small animal species and more than 80 percent of bird species in the Sierra Nevada. High-elevation mammals have moved upslope, while birds and low-elevation mammals have moved downslope as frequently as upslope. The varied responses reflect the species' intrinsic sensitivity to temperature, precipitation, or other physical factors, such as changes in food sources, vegetation, and interactions with competitors.

Additionally, range shifts have been noted in wintering bird species and time shifts of arriving species have been noted in butterflies and migratory birds. Furthermore, ocean acidification has affected marine organisms and their food chain. Chinook salmon, for example, have been affected by climate change in terms of both the number of adults returning to spawn and the increased mortality rate among juvenile salmon, while California sea lions have had lower birth rates, higher pup mortality, and increased numbers of pups having poor conditions during years of warmer sea temperatures.

Public Health

Global climate change is also anticipated to result in more extreme-heat events. These extreme-heat events increase the risk of death from dehydration, heart attack, stroke, and respiratory distress, especially for people who are ill, children, the elderly, and the poor, who may lack access to air conditioning and medical assistance. A warming planet is expected to bring more severe-weather events, worsening wildfires and droughts, a decline in air quality, rising sea levels, and increases in allergens and vector-borne diseases, all of which present significant risks to the health and well-being of California populations.

c. Emissions Inventories

Global Greenhouse Gas Emissions

Worldwide human-caused emissions of GHGs were approximately 37,900 $MMTCO_2e$ in 2021, including ongoing emissions from industrial and agricultural sources and emissions from land use changes (e.g., deforestation). Emissions of CO_2 from fossil fuel use and industrial processes account for 65 percent of the total, while CO_2 emissions from all sources account for 76 percent of the total GHG emissions.

United States Greenhouse Gas Emissions

In 2021, the United States was the world's second largest emitter at 4,800 $MMTCO_2e$.[208] Of the major sectors nationwide, transportation accounts for the highest volume of GHG emissions (approximately 27 percent), followed by electricity (25 percent), industry (24 percent), agriculture (11 percent), commercial buildings (7 percent), and residential buildings (6 percent). Between 1990 and 2020, total U.S. GHG emissions decreased by 7.3 percent from a high of 15.7 percent above 1990 levels in 2007.

California Greenhouse Gas Emissions

CARB compiles GHG inventories for the State of California. Based on the 2020 GHG inventory data (i.e., the latest year for which data are available from CARB), emissions from GHG-emitting activities state-wide were 371.1 $MMTCO_2e$, including emissions resulting from imported electrical power. In 2022, California's total GHG emissions were approximately 9.3 $MMTCO_2e$ less than in 2021 and have been declining since 2007. Between 1990 and 2022, California's population grew by approximately 10 million, from 29.8 million to 39.1 million, representing an increase in population of approximately 31 percent from 1990 population levels. Thus, per capita GHG has been declining.

Despite population and economic growth, CARB's 2022 state-wide GHG inventory indicated that California's net GHG emissions in 2022 were below the 2020 GHG emissions limit of 431 $MMTCO_2e$, as codified in California Health and Safety Code Division 25.2 (AB 32). **Table 4.10-1** identifies and quantifies state-wide anthropogenic GHG emissions and sinks (e.g., carbon sequestration caused by forest growth) in 1990 and 2022.

Although the transportation sector remains the largest contributor to state-wide GHG emissions at approximately 38 percent in 2020, the electric vehicle adoption rate is occurring faster than anticipated. California has reached 1.5 million electric vehicle sales 2 years ahead of its planned 2025 target for the sales milestone. The rate of electric vehicle adoption rate is occurring faster than anticipated in 2018. California has reached 1.8 million electric vehicle sales 2 years ahead of its planned 2025 target for the sales milestone (CEC 2023). In the second quarter of 2024, approximately 24.9 percent of new light-duty vehicle sales in California were electric.

[208] China was the largest emitter of CO_2, at 12,500 MMT.

Table 4.10-1: California Greenhouse Gas Emissions Inventory for Years 1990 and 2022

Category	Total 1990 Emissions Using GWP from IPCC's SAR ($MMTCO_2e$)	Percent of Total 1990 Emissions	Total 2022 Emissions Using GWP from IPCC's AR4 ($MMTCO_2e$)	Percent of Total 2020 Emissions
Transportation	150.7	35%	139.9	39%
Electric Power	110.6	26%	59.8	16%
Commercial & Residential Fuel Use	44.1	10%	39.5	14%
Industrial	103.0	24%	72.7	23%
Non-specified	1.3	<1%	—[a]	—
Agriculture/Forestry	23.6	6%	29.8	8%
Forestry Sinks	-6.7	-2%	—[b]	—
NET TOTAL (IPCC SAR)	**426.6**	**100%**[c]	**—**	**—**
NET TOTAL (IPCC AR4)[d]	**431**	**100%**[c]	**371.1**	**100%**[d]

SOURCE: CARB 2024.

ABBREVIATIONS: AR4 = Fourth Assessment Report; GWP = global warming potential; IPCC = Intergovernmental Panel on Climate Change; $MMTCO_2e$ = million metric tons of carbon dioxide equivalent; SAR = Second Assessment Report

NOTES:

a. The "Non-specified" category is not specifically called out in the 2022 emissions inventory.
b. Revised methods under development (not reported for 2022).
c. Total of individual percentages may not add up to 100% due to rounding.
d. The California Air Resources Board revised the state's 1990-level GHG emissions using GWPs from the IPCC AR4.

San Francisco Bay Area Greenhouse Gas Emissions

As stated in the *2017 Clean Air Plan*, in 2015, GHG emissions in the Bay Area were approximately 85 $MMTCO_2e$ per year. Based on the 2015 data, Bay Area emissions from the transportation sector represented the largest source of GHG emissions at 41 percent, followed by stationary industrial sources at 26 percent, electricity generation and co-generation at 14 percent, and fuel use (primarily natural gas) by buildings at 10 percent. The remaining emissions are composed of fluorinated gas emissions and emissions from solid waste and agriculture. Of the total transportation emissions in 2015, on-road sources accounted for approximately 87 percent, while off-road sources accounted for the remainder (BAAQMD 2017a).

City of Brisbane Greenhouse Gas Emissions

The City of Brisbane published its 2021 Community Greenhouse Gas Inventory Report (Inventory Report) in 2024. According to the Inventory Report, local emissions generated within the city limits equaled 72,969 $MTCO_2e$. In Brisbane, the largest source of GHG emissions was the transportation sector (59 percent, which includes total vehicle miles traveled [VMT] and off-road residential equipment), followed by the energy sector (26 percent, which includes electricity and natural gas use in homes, commercial and industrial businesses, other buildings, and stationary sources). In addition, the solid waste sector generated 15 percent, and the wastewater and water sector generated less than 1 percent of emissions.

Specific Plan Area GHG Emissions

Existing Baylands development would largely be displaced by Specific Plan development, including industrial buildings along Bayshore Boulevard and Industrial Way; buildings along Tunnel Avenue, except for structures within the Golden State Lumber site, which would remain; and industrial buildings along the south side of Beatty Avenue. The buildings along Industrial Way that would be removed total 261,400 square feet. GHG emissions from these uses were estimated using California Emissions Estimator Model (CalEEMod) version 2022.1, a state-wide land use emissions computer model to quantify potential emissions of criteria pollutants and GHGs from a variety of land use projects.[209] **Table 4.10-2** presents an estimate of existing emissions from these existing operations.

Table 4.10-2: Existing Greenhouse Gas Emissions Inventory for the Specific Plan Area

Source	Annual $MTCO_2e$
Area	12
Natural Gas	662
Electricity [a]	290
Mobile—on road	102
Waste	7
Water	8
Former Brisbane Landfill Emissions [b]	7,564
TOTAL, OPERATIONAL	**9,365**

SOURCE: Data compiled by Environmental Science Associates in 2023 using CalEEMod (see Appendix G.1 and H.1). Landfill gas emissions from the City of Brisbane.

ABBREVIATIONS: CO_2e = carbon dioxide equivalent; MT = metric tons

a. Indirect electrical emissions are calculated using CalEEMod and conservatively do not assume participation in local Community Choice Aggregation Program. Therefore, the emission calculation methodology for indirect electricity differs from that of the City's inventory.
b. The former Brisbane landfill has an existing landfill gas collection system.

4.10.3 REGULATORY CONTEXT FOR BAYLANDS DEVELOPMENT

a. Federal Laws, Plans, Programs, and Regulations

Greenhouse Gas Emissions Regulations

Although the federal Clean Air Act does not specifically regulate GHG emissions, the U.S. Supreme Court ruled on April 2, 2007, in *Massachusetts v. U.S. Environmental Protection Agency*

[209] Additional information on the CalEEMod model, including user guide and documentation are provided online at: https://www.caleemod.com/user-guide.

that GHGs are pollutants that can be regulated under the Clean Air Act. Currently, there are no federal regulations that establish ambient air quality standards for GHGs.

The USEPA Administrator determined that atmospheric concentrations of GHGs endanger the public health and welfare within the meaning of Section 202(a) of the Clean Air Act, and on December 7, 2009, the USEPA Administrator signed the following two findings regarding GHGs under Section 202(a) of the Clean Air Act:

- **Endangerment Finding:** The current and projected concentrations of the six key well-mixed GHGs—carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride—in the atmosphere threaten the public health and welfare of current and future generations. USEPA also found that the combined emissions of these GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution that endangers public health and welfare under Clean Air Act Section 202(a). Subsequently, federal agencies have adopted specific GHG-related regulations and initiatives, including the following:
    - **USEPA and National Highway Traffic Safety Administration Standards to Cut Greenhouse Gas Emissions and Fuel Use for New Motor Vehicles:** These are coordinated steps to enable the production of a new generation of clean vehicles.
    - **Renewable Fuel Standard Program:** Transportation fuel sold in the United States is required to contain a minimum volume of renewable fuel.
    - **Stationary Sources:** On May 13, 2010, USEPA set GHG emissions thresholds to define when permits under the New Source Review Prevention of Significant Deterioration (PSD) and Title V Operating Permit programs are required for new and existing industrial facilities. This final rule "tailors" the requirements of these Clean Air Act permitting programs to limit covered facilities to the nation's largest GHG emitters: power plants, refineries, and cement production facilities.
    - **Timing of Applicability of the Prevention of Significant Deterioration Permitting Program to GHGs:** In June 2014, the U.S. Supreme Court ruled that USEPA cannot classify facilities as major Prevention of Significant Deterioration or Title V sources based solely on their GHG emissions meeting the major source threshold. However, the Supreme Court said that USEPA could continue to require Prevention of Significant Deterioration permits if triggered by criteria pollutant emissions and these permits contain Best Available Control Techniques limits for GHG emissions.
- **Cause or Contribute Finding:** The combined emissions of these well-mixed greenhouse gases from new motor vehicles and new motor vehicle engines contribute to greenhouse gas pollution, which threatens public health and welfare.

These findings were a prerequisite for implementing emissions standards for vehicles and do not directly impose requirements on developments or agencies.

b. State Laws, Plans, Programs, and Regulations

Legislation

Assembly Bill 32

California's major initiative for reducing GHG emissions is outlined in Assembly Bill (AB) 32, the "California Global Warming Solutions Act of 2006." AB 32 codified the state-wide goal of reducing GHG emissions to 1990 levels by 2020 and required CARB to prepare a Scoping Plan to outline the main state strategies to meet the 2020 deadline for reducing GHGs. In addition, AB 32 requires CARB to adopt regulations that require reporting and verification of state-wide GHG emissions. The initial Scoping Plan was approved by CARB on December 11, 2008, and included GHG emission reduction strategies related to energy efficiency, water use, and recycling and solid waste. Many of the GHG reduction measures included in the Scoping Plan (e.g., Low Carbon Fuel Standard, Advanced Clean Car standards, and Cap-and-Trade) have been adopted since approval of the Scoping Plan. In 2016, the State of California achieved its 2020 GHG emission reduction targets as annual emissions fell below 431 $MMTCO_2e$ (CARB 2018).

Senate Bill 32

Senate Bill (SB) 32, which became effective on January 1, 2017, requires CARB to develop technologically feasible and cost-effective regulations to achieve the targeted 40 percent GHG emission reduction by 2030 set in EO B-30-15.

Senate Bill 375

Adopted on September 30, 2008, SB 375 established mechanisms to develop regional targets for reducing GHG emissions from passenger vehicles. On September 23, 2010, CARB adopted the vehicular GHG emissions reduction targets that were developed in consultation with metropolitan planning organizations across the state. SB 375 recognizes the importance of achieving significant GHG reductions by working with cities and counties to change land use patterns and improve transportation alternatives. SB 375 directives include:

1. Creation of regional targets for GHG emissions reduction tied to land use;
2. A requirement that regional planning agencies, including the Association of Bay Area Governments (ABAG) and Metropolitan Transportation Commission (MTC), work with local jurisdictions to develop a Sustainable Communities Strategy (SCS) to meet GHG emissions reduction targets (or an Alternative Planning Strategy if the SCS would not reach the target set by CARB);

3. A requirement that regional transportation funding decisions be consistent with the SCS;
4. A requirement that the Regional Housing Needs Allocation numbers for municipal general plan housing element updates must conform to the sustainable communities strategy; and
5. CEQA exemptions and streamlining for projects that conform to the sustainable communities strategy.

The San Francisco Bay Area's reduction target for per capita vehicular GHG emissions is a 10 percent per capita reduction by 2020 and a 19 percent per capita reduction by 2035 relative to 2005 levels.

Senate Bill 1383

Adopted in September 2016, SB 1383 requires CARB to approve and begin implementing a comprehensive strategy to reduce emissions of short-lived climate pollutants. The bill requires the strategy to achieve the following reduction targets by 2030:

- Methane: 40 percent below 2013 levels
- Hydrofluorocarbons: 40 percent below 2013 levels
- Anthropogenic black carbon: 50 percent below 2013 levels

Assembly Bill 1279 (California Climate Crisis Act)

AB 1279 includes a package of significant climate legislation that includes a codification of the state's goal to reach net zero increases in GHG emissions by 2045. With the passage of AB 1279, California has locked in a pathway to reach net zero emissions by no later than 2045. This goal requires California to cut GHG emissions by 85 percent compared to 1990 levels, ensuring that the state uses all available solutions to sharply cut pollution from sources such as industrial facilities, vehicles, and power plants.

Scoping Plans

Climate Change Scoping Plan

CARB developed and approved the initial Scoping Plan in 2008, implementing a specific requirement of AB 32. The Scoping Plan outlined the regulations, market-based approaches, voluntary measures, policies, and other emission reduction programs that would be needed to meet the 2020 state-wide GHG emission limit and initiate the transformations necessary to achieve the state's long-range climate objectives (CARB 2008).

CARB approved the 2017 Climate Change Scoping Plan Update (2017 Scoping Plan Update) in December 2017. The 2017 Scoping Plan Update outlined an action framework to achieve a

40 percent reduction in GHG emissions relative to 1990 levels by 2030. Through a combination of data synthesis and modeling, CARB determined the target state-wide 2030 emissions limit to be 260 $MMTCO_2e$, and that further commitments would be needed to achieve an additional reduction of 50 $MMTCO_2e$ beyond then-current policies and programs. The cornerstone of the 2017 Scoping Plan Update was an expansion of the cap-and-trade program to meet the aggressive 2030 GHG emissions goal and ensure that the state achieves the 2030 limit set forth by EO B-30-15.

In the 2017 Scoping Plan Update, CARB recommended state-wide targets of no more than 6 $MTCO_2e$ per capita by 2030 and no more than 2 $MTCO_2e$ per capita by 2050. CARB acknowledged that because these targets were based on the state-wide GHG emissions inventory that includes all emissions sectors, it would be appropriate for local jurisdictions to derive evidence-based, local per-capita goals based on local emissions and growth projections.

To demonstrate how a local jurisdiction can achieve its long-term GHG goals at the community plan level, CARB recommends developing a geographically specific GHG reduction plan (climate action plan) consistent with the requirements of CEQA Section 15183.5(b). Once adopted, a so-called "CEQA-qualified" GHG reduction plan can provide local governments with a tool for streamlining project-level environmental review of GHG emissions, provided that there are adequate performance metrics for determining project consistency with the plan. Absent conformity with such a plan, CARB (2017) recommends "that projects incorporate design features and GHG reduction measures, to the degree feasible, to minimize GHG emissions. Achieving no net additional increase in GHG emissions, resulting in no contribution to GHG impacts, is an appropriate overall objective for new development." While acknowledging that recent land use development projects in California have demonstrated the feasibility to achieve net-zero additional GHG emissions (e.g., Newhall Ranch Resource Management and Development Plan), the 2017 Scoping Plan Update states the following:

> *Achieving net zero increases in GHG emissions, resulting in no contribution to GHG impacts, may not be feasible or appropriate for every project, however, and the inability of a project to mitigate its GHG emissions to net zero does not imply the project results in a substantial contribution to the cumulatively significant environmental impact of climate change under CEQA. Lead agencies have the discretion to develop evidence-based numeric thresholds (mass emissions, per capita, or per service population) consistent with this Scoping Plan, the State's long-term GHG goals, and climate change science…To the degree a project relies on GHG mitigation measures, CARB recommends that lead agencies prioritize on-site design features that reduce emissions, especially from VMT, and direct investments in GHG reductions within the project's region that contribute potential air quality, health, and economic co-benefits locally.*

2022 Scoping Plan for Achieving Carbon Neutrality

The 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan) assesses progress toward the statutory 2030 GHG reduction target, while laying out a path to achieving carbon neutrality no later than 2045. The 2022 Scoping Plan focuses on outcomes needed to achieve carbon neutrality by assessing paths for clean technology, energy deployment, natural and working lands, and others, and is designed to meet the state's long-term climate objectives and support a range of economic, environmental, energy security, environmental justice, and public health priorities. With respect to the transportation sector in particular, the update strives to achieve a per-capita VMT reduction of at least 25 percent below 2019 levels by 2030 and 30 percent below 2019 levels by 2045.

The 2022 Scoping Plan, adopted by CARB in December 2022, expands on prior versions of the Scoping Plan, and responds to more recent legislation. The plan outlines a technologically feasible, cost-effective, and equity-focused path to achieve the state's climate target of reducing anthropogenic emissions to 85 percent below 1990 levels and achieving carbon neutrality by 2045 or earlier. The 2022 Scoping Plan outlines the strategies the state will implement to achieve carbon neutrality, which include reducing GHG emissions to meet the anthropogenic target, expanding actions to capture and store carbon through the state's natural and working lands, and using mechanical approaches.

The major element of the 2022 Scoping Plan is the decarbonization of every sector of the economy. Successful implementation of this element will require all of the following efforts:

- Rapidly moving to zero-emission transportation for cars, buses, trains, and trucks.
- Phasing out the use of fossil gas for heating.
- Reducing the use of chemicals and refrigerants.
- Enabling communities to provide sustainable options such as walking, biking, and public transit to reduce reliance on cars.
- Continuing to build out solar arrays, wind turbine capacity, and other resources to provide clean, renewable energy to displace fossil fuel–fired electrical generation.
- Scaling up new options such as renewable hydrogen for hard-to-electrify end uses and biomethane where needed.

The 2022 Scoping Plan approaches decarbonization from two perspectives: (1) managing a phasedown of existing energy sources and technology and (2) ramping up, developing, and deploying alternative clean energy sources and technology over time. Key actions to support the success of the 2022 Scoping Plan are addressed for the transportation sector, the clean-electricity grid, sustainable manufacturing and buildings, CO_2 removal and capture, short-lived climate pollutants, and natural and working lands.

Cap-and-Trade Program

Initially authorized by AB 32 and extended through 2030 with the passage of AB 398 in 2017, the California Cap-and-Trade Program is a core strategy that the state is using to meet its GHG reduction targets through 2030, and ultimately to achieve an 80 percent reduction from 1990 levels by 2050. CARB designed and adopted the California Cap-and-Trade Program to reduce GHG emissions from "covered entities"[210] (e.g., electricity generation, petroleum refining, cement production, and large industrial facilities that emit more than 25,000 $MTCO_2e$ per year), setting a firm cap on state-wide GHG emissions and employing market mechanisms to achieve reductions.[211] Under the Cap-and-Trade Program, an overall limit is established for GHG emissions from capped sectors. The state-wide cap for GHG emissions from the capped sectors commenced in 2013 and declines over time. Facilities subject to the cap can trade permits to emit GHGs.[212]

Automobile Fuel Efficiency Standards

The National Highway Transportation Safety Administration's (NHTSA) Corporate Average Fuel Economy Standards (CAFÉ) regulate the average fuel economy of cars and light-duty trucks (collectively, light-duty vehicles). NHTSA also separately sets fuel consumption standards for medium- and heavy-duty trucks and engines

The current CAFÉ standards for model years 2024–2026 require new passenger and light-duty vehicles sold in the US to average at least 40 miles per gallon (mpg). This is a nearly 43 percent increase from the previous standard of approximately 28 mpg.

In June 2024, NHTSA issued new vehicles fuel economy standards, increasing fuel economy by 2 percent per year for passenger cars (model years 2027-2031) and light trucks (model years 2029–2031). These increases will bring the average light-duty vehicle fuel economy up to approximately 50.4 miles per gallon by model year 2031 (NHTSA 2024). Furthermore, the rate of electric vehicle adoption rate is occurring faster than anticipated. California has reached 1.5 million electric vehicle sales 2 years ahead of its planned 2025 target for the sales milestone. At this time, approximately 25 percent of new car sales in California are electric vehicles.

[210] "Covered entity" means an entity in California that has one or more of the processes or operations and has a compliance obligation as specified in Subarticle 7 of the Cap-and-Trade Regulation; and that has emitted, produced, imported, manufactured, or delivered in 2008 or any subsequent year more than the applicable threshold level specified in section 95812(a) of the Regulation.

[211] 17 CCR Sections 95800–96023.

[212] See, generally, 17 CCR Sections 95811 and 95812.

c. Regional Plans, Programs, and Regulations

BAAQMD CEQA Thresholds for Evaluating Significance of Climate Impacts

The BAAQMD CEQA Air Quality Guidelines were prepared to assist in the evaluation of air quality, toxic air contaminants, and GHG impacts of projects and plans proposed in the Bay Area. The BAAQMD's CEQA Guidelines includes significance thresholds for GHG emissions.

In April 2022, in response to SB 32 and Draft 2022 Scoping Plan Update targets for 2030 and the EO B-88-18 target for carbon neutrality no later than 2045, BAAQMD adopted updated CEQA Thresholds For Evaluating Significance Of Climate Impacts. The suggested thresholds identify what new land use development projects would need to do to achieve California's long-term climate goal of carbon neutrality by 2045. Pursuant to the BAAQMD CEQA Climate Thresholds, a project designed to incorporate these elements would contribute its fair share of what is necessary to achieve California's long-term climate goals, and an agency reviewing the project under CEQA can conclude that the project would not make a cumulatively considerable contribution to global climate change. Additional information is provided in Section 4.10.5 below.

d. City of Brisbane Plans, Ordinances, and Regulations

General Plan

General Plan policies directly related to climate change and reduction of GHG emissions are presented below.

Chapter VI: Conservation

Policy 139: Promote the conservation of non-renewable energy resources.

Policy 140: Encourage energy-efficient building design and site planning.

Program 140a: Continue to administer building codes that contain State requirements for energy conservation.

Program 140b: As a part of the review of land use applications for subdivisions, specific plans and new non-residential and multi-family projects, encourage the design and siting of structures and the use of landscape materials in terms of utilizing natural resources for heating and cooling.

Policy 141: Encourage the installation of energy-efficient appliances.

Program 141a: Cooperate with PG&E in promoting energy conservation by providing information and referral on energy-efficient appliances and heating and cooling systems.

Policy 142: Continue to support vehicle trip-reduction programs to conserve non-renewable fuels. [See Chapters VI and X of the City's general plan for additional trip reduction policies.]

Chapter XII: Policies and Programs by Subareas

Policy BL.1: Development within the Baylands Subarea shall be subject to the City's approval of a single specific plan for the entirety of the Baylands Subarea and a development agreement that is consistent with General Plan policies, incorporates all applicable EIR [environmental impact report] mitigation measures, and is consistent with the following standards: …

G. The required specific plan for the Baylands shall include a sustainability program for new development consistent with the principles of the Sustainability Framework for the Brisbane Baylands, Final Report accepted by the City Council on November 5, 2015. Baylands development shall be designed so as to be energy neutral on an ongoing basis.

Brisbane Climate Action Plan

In September 2015, the City of Brisbane adopted its first climate action plan (CAP), which established a GHG emission reduction goal of 15 percent below 2005 levels by the year 2020. This plan was a comprehensive and strategic approach to sustainability, recommending actions to engage all members of Brisbane's community in a journey to protect the environment. The CAP identified key forces that contribute substantially to GHG emissions and provided strategies for reducing emissions in these areas.

The City's most recent GHG inventory report for the 2021 calendar year, published in 2024, showed an estimated 13.66 percent reduction of emissions, falling short of their initial goal from 2015. In July 2021, via Resolution No. 2021-62 "Climate Emergency Declaration," the City established new emissions reduction targets of 66 percent reduction from the 2005 baseline by 2030 and carbon neutrality by 2040.

Brisbane Municipal Code

Brisbane Municipal Code Section 15.77 implements the goals of the city's climate action plan and related California legislation by lowering the environmental impact of existing buildings through reductions in GHG emissions, energy, and water consumption. Owners and/or tenants of identified public and private properties are initially required to complete annual building energy and water benchmarking. Subsequently, these owners/tenants will be required to demonstrate compliance with contemporary best energy and water performance standards by following either a performance pathway that allows the submittal of documentation confirming the building is already highly efficient, or a prescriptive pathway that requires an energy audit and retro-commissioning or retrofit of base building systems. It is the intent of this chapter that

the provisions align with California Assembly Bill 802 (2015), codified in California Public Resources Code Section 25402.10 and California Code of Regulations Title 20, Division 2, Chapter 4, Article 9.

Brisbane Municipal Code Section 15.80 specifies green building standards for new developments, including meeting a minimum Leadership in Energy and Environmental Design (LEED) "Silver" rating on the Green Building Project Checklist for all new commercial projects over 10,000 square feet and achieving a "green home" rating on the Multi-Family GreenPoint Checklist[213] for any residential developments with 20 or more units. To meet these requirements, a variety of energy, stormwater, and water efficiency measures can be implemented that are integrated in green building design, siting, construction, and operations.

Building Code: Ordinance No. 691, Energy Performance Reach Code

The latest update to the California Building Code (CBC) was adopted by the City of Brisbane and is effective as of January 1, 2023. Subsequently, on July 18, 2024, the Brisbane City Council adopted further Municipal Code amendments in the form of an Energy Performance Reach Code (Ordinance No. 691). At the same time, the Council adopted further amendments to the City's EV charging requirements (see discussion below under "Chapter 15.84, Electric Vehicle Infrastructure").

The CBC requires that new construction be more energy efficient and includes solar requirements for new residential construction. In addition, through Ordinance 675,[214] the City of Brisbane has chosen to exceed the state's standards including installation of electric vehicle charging infrastructure, discussed below.

Ordinance No. 691, the City's Energy Performance Reach Code, both amended EV charging infrastructure requirements, discussed below, and added Energy Performance requirements for new buildings; the latter replaced all-electric requirements previously adopted under Ordinance No. 675. The 2022 CBC requires that new construction be more energy efficient and includes solar energy and battery storage system requirements for new residential and nonresidential construction. Through the Reach Code, the City of Brisbane has chosen to exceed the state's standards by requiring new residential and non-residential development to meet increased energy performance standards, resulting in an anticipated decrease in energy use and emissions from newly constructed buildings, compared to compliances with the 2022 CBC. The enhanced

[213] Build It Green, a non-profit organization, has developed New Home Construction Green Building Guidelines and a Multi-Family GreenPoint Checklist, based upon the Multi-Family Green Building Guidelines established by the Alameda County Waste Management Authority. See Section 15.80.020 of the Brisbane Municipal Code for more information.

[214] Brisbane Ordinance No. 675 can be found at https://library.municode.com/ca/brisbane/ordinances/municipal_code?nodeId=1185187. Ordinance No. 675 amended CALGreen, as it applies in Brisbane (Municipal Code Section 15.04.043), such that new construction and qualifying alterations "do not use combustion equipment or are ready to accommodate installation of electric heating appliances," with certain exceptions.

performance requirements apply to all new construction and are intended to be attainable through compliance with performance standards, rather than through a prescriptive approach that would mandate appliances that exceed federal efficiency standards. Thus, the Reach Code does not prohibit the use of natural gas or propane appliances, although such use must be within an overall building energy use scheme that complies with the new City performance requirements. Additionally, construction that does employ natural gas or propane must also include electrical circuitry to allow for potential future conversion to electric appliances.

The new Reach Code sets forth compliance metrics for single-family residential new construction and for multi-family residential and non-residential new construction, each of which is based on definitions in the California Energy Code (24 CCR Part 6). For single-family homes, the Reach Code requires the achievement of a performance standard (Energy Budget) based on the building's Energy Design Rating. The Energy Design Rating factors in both overall energy efficiency and "time-dependent valuation" (TDV) Energy. TDV Energy considers the varying costs and impacts of energy use at different times of the day and year, including, among other things, greenhouse gas emission rates and actual cost of electricity from "peaker" power plants, which are typically less efficient facilities that operate only during periods of highest energy demand (e.g., on the hottest days of the year, when air conditioning use is highest). TDV Energy is intended to reflect the fact that energy use during periods of peak demand has greater environmental and economic costs than off-peak energy use. Both Source Energy and TDV Energy for a particular building are determined based on calculation methodologies set forth by the California Energy Commission in manuals and appendices to the state Energy Code.

Similarly, for new multifamily residential buildings, the Reach Code requires achievement of TDV Energy Budget as set forth in the Code. Different standards apply to low-rise (four stories or fewer) and high-rise (more than four stories) buildings. Exceptions are available for both single- and multi-family buildings in cases of documented infeasibility and other limited circumstances.

In addition, the Brisbane City Council adopted an updated Transportation Demand Management (TDM) ordinance amending Brisbane Municipal Code Section 10.52 on October 19, 2023. The TDM ordinance's purpose is to "promote more efficient utilization of existing transportation facilities."

Chapter 15.84, Electric Vehicle Infrastructure

Chapter 15.84 of the City's Municipal Code, the Electric Vehicle Infrastructure Ordinance, sets forth requirements for the installation of electric vehicle (EV) charging equipment in new construction.

- For new single-family residences, duplexes, and townhouses (and new garages at existing such buildings) where two or more parking spaces per unit are required, the Code

requires installation of one Level 1 EV Ready Circuit and one Level 2 EV Ready Circuit.[215]

- For new multifamily residential buildings, the Code requires a minimum of one EV-ready parking space per unit, with a minimum 10 percent of these spaces equipped with Level 2 EV chargers. Additionally, at least 50 percent of guest parking spaces must have EV chargers. Finally, a minimum of 40 percent of the total number of parking spaces must be EV-ready or have chargers installed.[216] For non-residential new construction:
    - Where nine or fewer parking spaces are required, at least one space must be either EV-ready or have an EV charger installed.
    - Where 10 or more parking spaces are required, at least 15 percent of the required spaces must have EV chargers, with an additional 10 percent or 35 percent more low-power (20-amp) EV ready spaces also required, depending on whether the non-residential use is defined in the Municipal Code as having higher or lower parking turnover.[217]

Resolution No. 2021-62, "Declaring a Climate Emergency and Initiating Immediate and Accelerated Action to Address the Climate Crisis and Limit Global Warming to 1.5 Degrees Celsius"

On July 15, 2021, the Brisbane City Council unanimously passed a Climate Emergency Declaration, Resolution No. 2021-62, which established aspirational goals of a 66 percent reduction in GHG emissions below the 2005 baseline by 2030 and carbon neutrality by 2040. Current state targets include a 40 percent GHG emissions reduction below 1990 levels by 2030, which is roughly equivalent to 50 percent reduction below 2005 levels (the City's baseline inventory) by 2030, and carbon neutrality by 2045.

4.10.4 RELEVANT SPECIFIC PLAN PROVISIONS

a. Active Transportation Facilities

An active transportation network consisting of an internal network of shared use paths, bicycle facilities, and sidewalks that comply with the Americans with Disabilities Act (ADA) will be developed to connect uses within the Baylands to each other and to existing local and regional

[215] Level 1 chargers operate using a standard 120-volt, 20-amp household electrical circuit. Level 2 chargers use higher-output 240-volt power sources (generally with a 40-amp capacity) so that recharge times for EVs are much faster than with Level 1 systems.

[216] Certain exceptions are permitted, including, in the application to multi-family residential buildings, a reduction in the number of EV-ready spaces to fewer than one per unit if fewer than one parking space per unit is required.

[217] Higher parking turnover uses are those such as retail, restaurants, professional offices, gyms, recreational uses, and meeting halls. Lower parking turnover uses are those such as office, R&D, industrial, hotels and schools.

routes. Pedestrian facility types are described in **Table 3-4**. The Baylands pedestrian network is illustrated in **Figure 3-44**. Baylands bicycle and micro-mobility facility types are identified in **Table 3-5** and illustrated in **Figure 3-45**.

A fare-free shuttle network will be provided to transport Baylands residents and workers throughout the site and connect the Baylands to downtown Brisbane and existing transit routes. Shuttle service is proposed to be established in two phases, initially providing an internal Baylands route and weekday connections to downtown Brisbane as illustrated in **Table 3-6** and **Figure 3-46**.

b. Energy Generation and Conservation

Renewable energy generation will include a 55-acre solar field along with building- and ground-mounted installations totaling 92,445 MWh of renewable energy generation.[218] In addition, the Specific Plan proposes 30 MW of battery-based, building-mounted stationary energy storage capacity that would be distributed across the Baylands within sustainable infrastructure, residential, and commercial land use areas, as permitted, to provide for establishment of a distributed energy resource management system. A 250 MW front-of-the-meter, utility-scale battery storage facility is also proposed to serve as a regional grid resource.

Consistent with the Baylands Sustainability Framework, the 2025 Specific Plan proposes not to provide natural gas service to new Baylands development. Existing natural gas service to surrounding off-site uses, including the Kinder Morgan Tank Farm, Recology facilities along Tunnel Avenue, and Golden State Lumber, would be maintained. Research and development uses within the Baylands would use on-site propane tanks on an as-required basis.

c. Transportation Demand Management

In addition to providing a roadway network, pedestrian and bicycle facilities, and transit services described above, the Specific Plan proposes preparation of Transportation Demand Management (TDM) Plans for each applicable site-specific development project as it undergoes site-specific development review. The purpose of these TDM plans is to encourage and incentivize travel other than via use of single-occupant vehicle trips in accordance with San Mateo County's Congestion Management Program requirements. The Specific Plan sets a project-wide trip reduction target of a minimum 25 percent below baseline Average Daily Traffic (ADT).

[218] The Specific Plan requires a minimum of 85,000 MWh of renewable electricity be generated within the Baylands. Based on the reasonably foreseeable mix of building types anticipated within the Baylands, actual renewable energy generation was estimated to be 92,445 MWh annually in the Baylands Energy Plan prepared by Thornton Tomasetti Inc. in May 2021.

4.10.5 SIGNIFICANCE CRITERIA

The following criteria were used to determine the significance of greenhouse gas emissions impacts.

Threshold GHG-1: The Baylands Specific Plan would cause a significant impact if it would result in a net increase in average annual greenhouse gas (GHG) emissions generated by Specific Plan land uses.

Threshold GHG-2: The Baylands Specific Plan would cause a significant impact if it would result in a net increase in average annual regional greenhouse gas (GHG) emissions.

Threshold GHG-3: The Baylands Specific Plan would cause a significant impact if it would conflict with:

- **The BAAQMD's 2022 *CEQA Thresholds for Evaluating the Significance of Climate Impacts* by:**
  - **Providing natural gas appliances or natural gas plumbing in either residential or nonresidential development;**
  - **Resulting in wasteful, inefficient, or unnecessary energy usage as determined by the analysis required under CEQA Section 21100(b)(3) and CEQA Guidelines Section 15126.2(b);**
  - **Achieving less than the reduction in project-generated vehicle miles traveled below the regional average specified in the current version of the California Climate Change Scoping Plan[219] or a locally adopted vehicle miles traveled reduction target; or**
  - **Not meeting CALGreen Tier 2 electric vehicle EV requirements;**
- **The CARB 2022 Climate Change Scoping Plan by obstructing implementation of relevant Scoping Plan actions to reduce GHG emissions related to VMT reduction and building decarbonization.**

[219] The 2022 Scoping Plan identifies a target per capita VMT reduction of "at least 25 percent below 2019 levels by 2030 and 30 percent below 2019 levels by 2045."

4.10.6 PROJECT IMPACTS AND MITIGATION MEASURES

a. Impact GHG-1: Specific Plan Area Greenhouse Gas Emissions

Methodology for Determining Significance

Quantification of greenhouse gas emissions followed the calculation guidance from state and regional agencies with scientific expertise in quantifying GHG emissions, such as CARB and the BAAQMD. Detailed assumptions are provided in the *Brisbane Baylands Specific Plan Project Greenhouse Gas Technical Report* in Appendix H.1. GHG emissions from construction and operation of the Baylands Specific Plan were estimated using California Emissions Estimator Model (CalEEMod) version 2022.1, a state-wide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential emissions of criteria pollutants and GHGs from a variety of land use projects.[220] The methodology for the evaluation of Specific Plan GHG impacts includes a quantitative evaluation of the net increase in Baylands emissions compared to the net-zero threshold.

Construction Emissions

The emissions of GHGs associated with Specific Plan construction were calculated using CalEEMod version 2022.1 for each year of construction activity based on the anticipated sequencing of Baylands construction described in **Table 3-8**. Construction emissions were then forecasted by assuming a conservative estimate of construction activities (i.e., assuming all construction occurs at the earliest feasible date during the year). This methodology is conservative since construction impacts would be similar to or less than those analyzed should construction activities occur later than assumed in **Table 3-8** because the energy-efficiency of construction equipment and vehicle fleet mix is expected to increase over time, while emissions from construction equipment and vehicles is expected to decrease. This occurs due to state and federal fuel economy regulations that require construction equipment fleet operators to phase in less polluting heavy-duty construction equipment and trucks over time.

Specific Plan construction activities would generate GHG emissions through the use of heavy-duty construction equipment and vehicle trips generated by construction workers, vendor trucks, and haul trucks traveling to and from the site. Construction GHG emissions were based on Baylands-specific data provided by the project applicant, including a construction equipment list and site map. For diesel-powered off-road construction equipment, emissions were calculated by CalEEMod assuming fleet average equipment and factors from the OFFROAD2017-ORION v1.0.1 model, which is incorporated in CalEEMod. Construction

[220] Additional information on the CalEEMod model, including user guide and documentation are provided online at: https://www.caleemod.com/user-guide

emissions typically vary from day to day, depending on the level of activity, the specific type of operation, and weather and wind conditions. To address this variability, CalEEMod analyzes annual average emissions.

Direct inputs to the model include project-specific information such as the size of development, construction schedule, and the type and amount of materials to be imported and exported, where such information is available. Where project-specific data was not available, CalEEMod default values were used. The output values used in this analysis were adjusted to be Baylands-specific based on equipment types and the construction schedule. Detailed assumptions are provided in the *Brisbane Baylands Specific Plan Project Air Quality Technical Report*. These values were then applied to the construction sequencing assumptions described in Draft EIR **Table 3-8**, which are the same as those used in the criteria air pollutant construction emissions. Construction-generated GHGs were amortized over a 30-year period and were then added to average annual operational emissions.[221]

Operational Emissions

Operational GHG emissions associated with mobile sources, area sources, energy use, water use, waste generation, and stationary sources (such as emergency backup generators) were estimated either using CalEEMod or using off-model calculations with methodologies consistent with CalEEMod. Detailed operational emissions calculations are included in Appendix H.1 and G.1, and the primary assumptions used to model operational GHG emissions are presented below.

Area Sources

Area sources of Baylands GHG emissions consist primarily of landscaping equipment use and refrigerant emissions. Hearths and woodstoves are not proposed for any of the residential land uses. Landscape equipment generates emissions of CO_2 and smaller amounts of methane and nitrous oxide. While landscape emissions will be reduced in the future through implementation of state regulations that require most newly manufactured small off-road engines such as those found in landscape equipment to be zero emission starting in 2024, the benefit of this regulation is not currently embedded in the CalEEMod model and is conservatively reported consistent with the modeled approach. Emissions resulting from landscape equipment use depend on the size of land uses, GHG emissions factors associated with each activity, and the GWP values for the GHGs that would be emitted. Refrigerant emissions are based on Specific Plan land use types since different types of refrigeration equipment are used by different uses. CalEEMod

[221] A 30-year amortization period is typically sed to represent the estimated useful life of the proposed project, consistent with preliminary guidance developed by the South Coast Air Quality Management District and widely used as an industry standard. The Baylands GHG operational analysis is consistent with OPR's *CEQA and Climate Change Advisory Discussion Draft*. As stated therein, "when possible, lead agencies should quantify the project's construction and operational greenhouse gas emissions, using available data and tools, to determine the amount, types, and sources of greenhouse gas emissions resulting from the project."

quantifies refrigerant emissions from leaks that are assumed to occur during regular operation and routine servicing of the refrigeration equipment's lifetime and then derives average annual emissions from the lifetime estimate.

Energy Use

GHG emissions from energy use result from the consumption of fossil fuels to generate electricity and to provide central heating, cooling, and hot water. The Specific Plan proposes to not extend natural gas service to Baylands buildings. Therefore, no GHG emissions would be generated from natural gas combustion.

Solar-powered infrastructure systems totaling 92,445 megawatt-hours (MWh) of annual generation are proposed to be installed on buildings, ground-mounted, and, where feasible, over parking lots. An approximately 55-acre solar farm would be installed within the eastern portion of the Baylands between Visitacion Creek and the relocated Lagoon Road on a phased basis as portions of the landfill closure process are completed.

The Specific Plan proposes 30 megawatts (MW) of distributed battery storage. Additionally, a front-of-the-meter, 250 MW utility-scale battery storage facility is proposed to serve as a regional resource. As discussed in Section 4.11, *Energy Resources*, the EIR does not assume development of the 250 MW utility-scale battery storage facility, since its construction is dependent on a number of market and regulatory factors beyond the control of the applicant or City of Brisbane. Because its development within the Baylands is not certain, the GHG benefits of the utility-scale battery storage facility are not assumed in emissions calculations.

As proposed, distributed battery storage facilities would be constructed with sufficient capacity to store solar energy generated on-site with the goal of storing energy in excess of that consumed by Baylands development during daylight hours for use during nighttime hours when solar energy is not being produced.

The net electricity energy above that generated within the Baylands that would be drawn from the grid on an average annual basis is documented in **Table 4.11-7,** Baylands Net Energy Consumption Analysis. The remainder of power would be supplied by Peninsula Clean Energy, which opts all users into a 100 percent renewable energy plan that is discretionary. However, given the existing opt-out rate of 2.5 percent for Peninsula Clean Energy (EQ Research 2019), some GHGs would likely be generated by a portion of overall electrical demand in the Specific Plan area. Therefore, a similar opt-out rate was assumed for the Baylands and net electrical-based GHG emissions from the energy sector are assumed to be generated by 2.5 percent of the overall demand in the Specific Plan area. However, that remaining electrical demand will ultimately become 100 percent renewable by 2045 at the latest (Pub. Utilities Code §§ 399.11, 399.30 and 454.33).

Mobile Sources

On-road mobile sources would include vehicle trips by residents, visitors, retail customers, employees, and vendor deliveries. On-road mobile emissions were estimated based on emission factors from EMFAC2021 using VMT figures generated by the Specific Plan's Transportation Impact Analysis, including implementation of a transportation demand management plan required to achieve with a 16.4 percent trip reduction target (Fehr & Peers 2023). Since all vehicle types could visit the Baylands, assessment of GHG emissions uses San Mateo County's motor vehicle fleet mix and the fleet average calendar year emissions factors from EMFAC2021 to estimate mobile source emissions. Countywide fleet-aggregated emission factors for 2038 (the first full year following the assumed completion date of Phase 1 development) were applied for operations of Phase 1, while countywide fleet-aggregated emission factors for 2043 (the first full year following the assumed full buildout of the Baylands) were applied for operations at full buildout.

The Specific Plan proposes electric vehicle (EV) charging infrastructure that would reduce operational vehicle GHG emissions. Mobile emissions reduction associated with EV charging infrastructure were calculated based on the number of EV-ready stalls proposed, the electricity demand required for EV charging, and the number of vehicle miles travelled that would otherwise be carbon-fuel based.

In addition to the conservative assumption that all 2025 Specific Plan project-related trips are new trips, the analysis below of Impact GHG-2 also evaluates the project's future cumulative regional VMT reduction in relation to greenhouse gas emissions occurring in 2040.

Water and Wastewater

Water and wastewater generated by Specific Plan land uses would require energy to supply, distribute, and treat potable and recycled water, as well as convey and treat wastewater.

Water supply for the Baylands would use a combination of (1) potable water purchased from the San Francisco Public Utilities Commission (SFPUC) supplemented by five existing off-site groundwater wells and (2) recycled water from a water recycling facility (WRF) to be constructed within the Baylands. GHG emissions from water treatment and conveyance were calculated using estimated water demand in the Baylands Water Balance Technical Memorandum (Brown & Caldwell 2022) and state-wide electricity intensity factors (CAPCOA 2020).

Based on an estimated average water demand of 1,408 acre-feet per year, and assuming that 198 acre-feet per year of water demand would be for outdoor irrigation and not discharged to the sanitary sewer, an adjustment was made to account for a conservatively estimated 25 percent of the remaining demand discharging to the SFPUC system. GHG emissions associated with wastewater treatment process at the SFPUC plant were calculated using emission factors from CalEEMod. The emissions are based on the type of treatment (e.g., aerobic). The emissions are

based on the water demand factors, the electrical intensity factors for wastewater treatment and conveyance, the GHG emission factors for the electricity utility provider, and the GWP values for the GHGs emitted. The future year CO_2 intensity factors of 85 pounds CO_2/MWh for year 2038 and 26 pounds of CO_2/MWh for year 2043 were scaled proportionately based on the future year renewable energy targets of 60 percent by 2030 and 100 percent by year 2045 consistent with Pub. Utilities Code §§ 399.11, 399.30 and 454.33 (NewGen Strategies & Solutions 2022).

The water recycling facility would be powered by on-site carbon-free electricity and no GHG emissions from electrical consumption were assumed to be generated by wastewater treatment associated with the facility. However, GHG emissions would be generated by non-electrical processes of the water recycling facility. Anaerobic digesters produce methane-rich biogas, which is typically combusted on site. The methane emissions from incomplete combustion of digester gas was quantified using methods detailed in CalEEMod Appendix C.

Solid Waste

Specific Plan development would generate solid waste from day-to-day operational activities. A portion of waste would be diverted to waste recycling and reclamation facilities, while waste that is not diverted would be sent to landfills for disposal. Waste that is disposed of in landfills would result in GHG emissions of CO_2 and methane during decomposition that would occur over the span of many years.

Solid waste generated by Specific Plan land uses is estimated to be 1,703.37 cubic yards of solid waste per day, 374 cubic yards of which would be hauled to a landfill based on Recology's projected 78 percent diversion rate, including compliance with the City's Municipal Code and applicable state and federal regulations (see Impact UTL-3, Section 4.16.6c). GHG emissions have been calculated based on emission factors for solid waste decomposition and the GWP values for the CH_4 emitted.

Stationary Sources

The Specific Plan would generate operational emissions from testing and maintenance of emergency generators. Buildings and facilities proposed or required to have backup emergency generators include all buildings with occupied space above 75 feet in height, the relocated fire station, the new fire station, and the water recycling facility. Emissions were calculated assuming 50 hours per year of non-emergency testing operation per CARB guidance and 100 hours per year of emergency use (non-testing and non-maintenance) per BAAQMD guidance.

Consistent with the Baylands Health Risk Assessment, generators were conservatively assumed to be 939 horsepower, except for the two fire stations (168 horsepower each), the solar farm (80 horsepower), the water recycling facility (2,012 horsepower), and the water tank (670 horsepower). These generator sizes were obtained from the environmental documents for other, similar facilities (described further, below). The generator at the water recycling facility, which

is greater than 1,000 hp, was assumed to meet BAAQMD's best available control technology (BACT) requirement of a Tier 4 Final-compliant engine, while generators smaller than 1,000 hp were assumed to meet the BACT requirement for a Tier 2-compliant engine. There are currently two backup diesel generators that are permitted by the BAAQMD at existing facilities along Industrial Way. Because no details are available regarding their size, the GHG emissions from these two diesel generators were not quantified.

Existing Baylands Tenants

The analysis of operational emissions assumed that 272,400 square feet (18 structures) of existing industrial buildings along Industrial Way would be demolished. Under existing conditions, GHG emissions from these existing uses are generated by vehicle trips to and from the business; on-site combustion of natural gas for heating; off-site combustion of fossil fuels for electricity; and off-site emissions from solid waste decomposition, water conveyance, and wastewater treatment.

As indicated in **Table 4.4-6**, there is adequate vacant building area in the region to accommodate existing Specific Plan uses that would be removed by Baylands development. For the quantitative analysis of GHG emissions associated with Specific Plan development, it was conservatively assumed that these industrial uses would locate elsewhere within the Bay Area region and would continue to operate with the same GHG-generating characteristics. Consequently, the existing GHG emissions from uses were assumed to continue elsewhere and not be eliminated with implementation of the project. This is a conservative assumption, as newer structures in the region are substantially more energy efficient than the older facilities located along Industrial Way, which were developed during the 1960s and 1970s.

Impact Assessment

Baylands development would generate GHG emissions from direct and indirect sources during construction and operation. Development phasing and anticipated construction sequencing for the Baylands are described in Draft EIR Section 3.3.4.

GHG emissions during construction would be generated from worker trips, vendor trips, and haul trips and from the site, along with use of heavy-duty construction equipment. Construction activities are anticipated to run through 2042, with the first full year of operations following Specific Plan buildout occurring in 2043, at which time the Specific Plan would generate only operational emissions, primarily from mobile sources (residents, employees and guests traveling to and from the site), area sources (use of landscape equipment), and stationary sources (testing and maintenance of emergency diesel generators).

Construction Emissions

Construction emissions for Specific Plan construction activities were calculated using CalEEMod. Total Baylands construction emissions were estimated on an annual basis based on the anticipated construction sequencing is summarized in **Table 3-8**. Total emissions were then amortized over a 30-year operational life of site development. Overall, as shown in **Table 4.10-3**, amortized over a 30-year period, construction emissions would be 2,425 $MTCO_2e$.

Table 4.10-3: Anticipated Annual Construction Emissions

Year	Residential Permits Issued	Commercial/Office Permits Issued	Total GHG Emissions ($MTCO_2e$ [a])
Site Grading			***20,031***
2025			11,879
2026			8,152
Phase 1	***2,200 units***	***4,500,000 s.f.***	***44,976***
2027	166 units	1,424,325 s.f.	8,866
2028	686 units		10,300
2029	337 units		8,807
2030	281 units		1,199
2031	333 units		4,363
2032	108 units	1,975,675 s.f.	3,681
2033	124 units		3,060
2034	165 units		658
2035		1,100,000 s.f.	1,423
2036			1,404
2037			1,215
Phase 2		***2,500,000 s.f.***	***7,756***
2038		1,120,000 s.f.	957
2039			1,897
2040		1,380,000 s.f.	2,357
2041			2,241
2042			304
BAYLANDS TOTAL	**2,200 units**	**7,000,000 s.f.**	**72,763**
GHG Emissions Amortized over 30 Years [a]			**2,425**

SOURCE: ESA, 2024.

NOTES:

a. Total construction emissions were amortized over 30 years to estimate average annual emissions when combined with operational GHG emissions in Table 4.10-5.

Operational Emissions

Annual GHG emissions resulting from area sources, energy use, mobile sources, waste generation, and water use for operation of the 2025 Specific Plan project were estimated for Phase 1 and full Specific Plan buildout. Annual GHG operations emissions after completion of Phase 1 (including amortized construction emissions) are estimated to be 38,473 $MTCO_2e$ (see **Table 4.10-4**). As shown in **Table 4.10-5**, Specific Plan buildout would result in a 51,260 $MTCO_2e$ annual increase in GHG emissions.

Table 4.10-4: Operational Emissions by Source at the Completion of Phase 1

Source	$MTCO_2e$/year
Area [a]	147
Energy	30
Emergency Generator	877
Mobile	33,397 [b]
Solid Waste	1,479
Water	144
Water Recycling Facility	103
Refrigeration	130
SUBTOTAL OPERATIONAL EMISSIONS	*36,307*
Amortized Construction Emissions	2,167
TOTAL OPERATIONAL EMISSIONS	**38,473**

SOURCE: Data compiled by Environmental Science Associates in 2024 (see Appendix H.1).

NOTES: CO_2e = carbon dioxide equivalent; MT = metric tons

a. Area sources of Baylands GHG emissions consist primarily of landscaping equipment use.
b. Includes a reduction of 1,745 $MTCO_2e$ for proposed EV charging.

The 2025 Specific Plan project would generate GHG emissions from direct and indirect sources during construction and operation. Construction activities would generate GHG emissions from worker trips, vendor trips, and haul trips, as well as from the use of heavy-duty construction equipment. A total of 72,763 $MTCO_2e$ would be generated by construction activities through Specific Plan buildout. When amortized over the anticipated 30-year life of Specific Plan improvements, annualized construction emissions would total 2,425 $MTCO_2e$ and, when these annualized construction emissions are added to operational GHG emissions at buildout, the Baylands Specific Plan would generate 51,260 $MTCO_2e$ of GHGs annually. Operational emissions are conservative, as it assumes all project-related vehicle trips are new to the Bay Area.

Table 4.10-5: Operational Emissions by Source at Full Specific Plan Buildout

Source	$MTCO_2e$/year
Area	228
Energy	15
Emergency Generators	984
Mobile	45,428 [a]
Waste	1,749
Water	134
WRF Wastewater	166
Refrigeration	131
SUBTOTAL OPERATIONAL EMISSIONS	*48,835*
Amortized Construction Emissions	2,425
INCREASE IN GHG EMISSIONS	**51,260**

SOURCE: Data compiled by Environmental Science Associates in 2024 (see Appendix H.1).

NOTES: CO_2e = carbon dioxide equivalent; MT = metric tons

a. Includes a reduction of 1,745 $MTCO_2e$ for EV charging proposed.

Regulations That Would Serve to Reduce GHG Emissions

The CalEEMod and EMFAC2021 emissions modeling programs that were used to estimate project GHG emissions provide for future emission reductions that would be realized by many existing regulations. However, there are newer regulations that have been adopted that are not currently considered within the emission factors and/or algorithms of the model. These are presented in Chapter 2, Section 2.5, Regulatory Context for Baylands Development. The regulations presented under *Newest Vehicle Regulations in 2021 and 2022* include the full description of the most recently adopted regulations that would serve to reduce on-road vehicle emissions and include the following:

- Heavy-Duty Inspection and Maintenance (2021)
- Advance Clean Cars II (2022)
- Advance Clean Fleets (2022)

The effect of these regulations is not included in CalEEMod or EMFAC2021 and thus not quantified in the analysis. However, qualitatively, these regulations would reduce emissions of GHG from medium- and heavy-duty trucks and emissions from light duty passenger vehicles. Although the reductions from these regulations are not quantified, this impact would still be significant because the reductions would not be sufficient to reduce emissions to a net zero increase.

Significance Conclusion for Impact GHG-1

Baylands development would add 51,260 $MTCO_2e$ to annual GHG emissions generated within the Specific Plan area. The effect of regulations that are not included in the CalEEMod or EMFAC2021 models and thus not quantified in this EIR would be to reduce GHG emissions from medium- and heavy-duty trucks and emissions from light duty passenger vehicles. However, such reductions would not be sufficient to offset the Specific Plan's net annual increase. A significant impact would therefore result.

Program EIR Mitigation Measures

No GHG emissions mitigation measures are being carried forward from the Program EIR.

Additional Mitigation Measures

MM GHG-1a: Low Global Warming Potential Refrigerants. Refrigerants with a global warming potential of 1,400 or less[222] shall be used in all heat pumps installed in residential and nonresidential buildings, including all HVAC systems, water heaters, and refrigeration appliances. Examples of such low global warming potential include, but are not limited to, natural refrigerants such as CO_2, ammonia (NH_3), and hydrocarbons, or next generation low-GWP synthetic refrigerants like hydrofluoroolefin-1234yf.

MM GHG-1b: Preferred Parking for Alternative-Fueled Vehicles and Carsharing Vehicles. Preferential parking for ZEVs (designated and proximate to the building entry) shall be provided for commercial, office, and hotel uses, as well as guest parking at a rate 10 percent above regulatory provision requirements. In addition, preferential parking shall be provided for ridesharing vehicles (designated and proximate to the building entry) site at a rate 10 percent above City requirements for a transportation demand management plan.

MM GHG-1c: Renewable Fuel Shuttles. The Baylands shuttle system described in Specific Plan Section 6.3.4 shall utilize zero-emission vehicles or run entirely on 100 percent renewable fuels.

MM GHG-1d: Renewable Fuels for On-Site Water Recycling Facilities. The Baylands water recycling facility shall be designed and operated using 100 percent renewable fuels, including carbon-free electricity provided by Pacific Gas & Electric or Peninsula Clean Energy or by on-site renewable energy generation.

[222] The U.S. EPA guidance for transitioning to low-GWP alternatives in commercial refrigeration provides available refrigerants with a GWP of 1,400 or less, https://www.epa.gov/sites/default/files/2016-12/documents/international_transitioning_to_low-gwp_alternatives_in_commercial_refrigeration.pdf.

MM GHG-1e: GHG Offset Credits. In addition to implementing all feasible construction- and operation-related land use design practices and related mitigation measures for the reduction of construction and operational greenhouse gas (GHG) emissions, the Specific Plan applicant shall retire GHG offset credits in a quantity sufficient to offset 100 percent of the Project's construction emissions and 100 percent of the Project's operational emissions, for a 30-year period, consistent with the performance standards and requirements set forth below. GHG offset credits within the City of Brisbane and regionally within the County shall be prioritized (see *Locational Performance Standards* below).

The Applicant may opt to prepare a Project-wide GHG Emissions Reduction Plan (Plan) to "true-up" re-modeled Project emissions with the amount of GHG offset credits needed to be retired to offset 100 percent of the Project's operational emissions, as stipulated in the section *Emissions Inventory "True Up" Procedures and Standards* below.

Purchase and Retire GHG Offset Credits: The Specific Plan applicant shall purchase and retire GHG offset credits sufficient to offset the project's post-mitigation GHG emissions for the life of the project (assumed to be 30 years) as shown in **Table 4.10-6**.

Table 4.10-6: Required GHG Emissions Offsets ($MTCO_2e$)

	Construction Emissions [a]		Operational Emissions [b]		Combined Emissions	
	Unmitigated	Mitigated [c]	Unmitigated	Mitigated [c]	Unmitigated	Mitigated [c]
Phase 1 [d]	65,007	61,227	1,089,199	1,088,840	1,154,206	1,150,067
Phase 2	7,756	7,756	375,855	375,855	383,641	383,611
TOTAL	**72,763**	**68,983**	**1,465,055**	**1,464,696**	**1,537,818**	**1,533,679**

NOTES: CO_2e = carbon dioxide equivalent; MT = metric tons

a. Construction emissions are total estimated emissions over the entirety of the construction period.
b. All operational values are calculated based on unrounded annual emissions multiplied by 30 years.
c. Mitigated emissions include implementation of the quantifiable air quality and GHG mitigation measures.
d. Phase 1 construction emissions are inclusive of grading.

For construction, the project applicant shall purchase and retire GHG offset credits necessary to offset construction-generated emissions before obtaining the first building permit in each phase of construction, for a total of two offset payments over both construction phases. Alternatively, payments may occur gradually as long as enough offsets are retired in time to offset total construction emissions for each phase.

The project applicant shall also purchase and retire GHG offset credits necessary to offset the cumulative residual increase in operational emissions over the life of the project before the City issues the final certificate of occupancy for the first

building in each phase of construction, for a total of two offset payments over two construction phases.

GHG Offset Credit Phasing: The project applicant shall purchase and retire GHG offset credits for each of the two construction phases and two operational phases as follows.

- ***Construction—Phase 1:*** Before obtaining the first grading or other construction-related permit for construction, the project applicant shall purchase and retire the first installment of GHG offset credits for construction emissions as presented in **Table 4.10-6**, above.
- ***Construction—Phase 2:*** Before obtaining the first grading or other construction-related permit in Phase 2 of construction, the project applicant shall purchase and retire GHG offset credits for construction emissions as presented in the table above.
- ***Operations—Phase 1:*** Before the City issues the final certificate of occupancy for the first building in Phase 1, the project applicant shall purchase the first installment of GHG offset credits for operational emissions as presented in the table above.
- ***Operations—Phase 2:*** Before the City issues the final certificate of occupancy for the first building in Phase 2, the project applicant shall purchase the second installment of GHG offset credits for operational emissions as presented in the table above.

GHG Offset Credit Standards – Eligible Registries, Acceptable Protocols and Defined Terms: "GHG offset credit" shall mean an instrument, credit or other certification verifying the reduction GHG emissions issued by one of the following CARB-approved carbon registries: the American Climate Registry, the Climate Action Reserve, and Verra (formerly Verified Carbon Standard). The GHG offset credits shall be third-party verified and enforceable in accordance with the registry's applicable standards, practices, or protocols. The Specific Plan applicant shall provide funding for the City to retain the services of a third-party expert who meets the qualifications described below.

GHG offset credits shall include, but are not limited to, an instrument, credit or other certification issued by these registries for GHG reduction activities within California. Further, no GHG offset credits shall originate from international areas, as discussed in the "Locational Performance Standards" section below. The Project shall neither purchase GHG offset credits from the Clean Development Mechanism (CDM) registry nor purchase offsets generated under CDM protocols. Qualifying GHG offset credits presented for compliance with

this mitigation measure may be used provided that the evidence required by the "Reporting and Enforcement Standards" below is submitted to the City demonstrating that each registry shall continue its existing practice of requiring the following for the development and approval of protocols or methodologies:

i) Adherence to established GHG accounting principles set forth in the International Organization for Standardization (ISO) 14064, Part 2 or the World Resources Institute/World Business Council for Sustainable Development (WRI/WBCSD) Greenhouse Gas Protocol for Project Accounting; and

ii) Oversight of the implementation of protocols and methodologies that define the eligibility of GHG offset credit projects and set forth standards for the estimation, monitoring, and verification of GHG reductions achieved from such projects. The protocols and methodologies shall:

   a. Be developed by the registries through a transparent public and expert stakeholder review process that affords an opportunity for comment and is informed by science;

   b. Incorporate standardized offset crediting parameters that define whether and how much emissions reduction credit a GHG offset project should receive, having identified conservative project baselines and the length of the crediting period, and considered potential leakage and quantification uncertainties;

   c. Establish data collection and monitoring procedures, mechanisms to ensure permanency in reductions, and additionality and geographic boundary provisions; and,

   d. Adhere to the principles set forth in the program manuals of each of the aforementioned registries, as such manuals are updated from time to time.

Further, any GHG offset credit used to reduce the project's GHG emissions shall be a GHG offset credit that represents the past or forecasted reduction or sequestration of one metric ton of carbon dioxide equivalent that is "not otherwise required" (CEQA Guidelines Section 15126.4(c)(3)). Each GHG offset credit used to reduce GHG emissions shall achieve additional, real, permanent, quantifiable, verifiable, and enforceable reductions, which are defined for purposes of this mitigation measure as follows:

i) "Additional" means that the GHG offset credit is not otherwise required by law or regulation, and not any other GHG emissions reduction that otherwise would occur.

ii) "Real" means that the GHG reduction underlying the GHG offset credit results from a demonstrable action or set of actions and is quantified under the protocol or methodology using appropriate, accurate, and conservative methodologies that account for all GHG emissions sources and sinks within the boundary of the applicable carbon offset project, uncertainty, and the potential for activity-shifting leakage and market-shifting leakage.

iii) "Verifiable" means that the GHG reduction underlying the GHG offset credit is well documented, transparent, and set forth in a document prepared by an independent verification body that is accredited through the American National Standards Institute (ANSI).

iv) "Permanent" means that the GHG reduction underlying the GHG offset credit is not reversible; or, when GHG reduction may be reversible, that a mechanism is in place to replace any reversed GHG emission reduction.

v) "Quantifiable" means the ability to accurately measure and calculate the GHG reduction relative to a project baseline in a reliable and replicable manner for all GHG emission sources and sinks included within the boundary of the GHG offset credit project, while accounting for uncertainty and leakage.

vi) "Enforceable" means that the implementation of the GHG reduction activity must represent the legally binding commitment of the offset project developer to undertake and carry it out.

The above definitions are provided as criteria and performance standards associated with the use of GHG offset credits. The City hereby clarifies that such criteria and performance standards are intended only to further construe the standards under CEQA for mitigation related to GHG emissions (see, e.g., State CEQA Guidelines Section 15126.4(a), (c)), and are not intended to apply or incorporate the requirements of any other statutory or regulatory scheme not applicable to the project (e.g., the Cap-and-Trade Program).

To be eligible to be used to meet this mitigation measure, GHG offset credits must be generated and verified in accordance with published protocols and other applicable standards that can demonstrate to the satisfaction of the City's third-party expert and reviewer that all six of these environmental integrity requirements are substantively satisfied. All GHG offset credits purchased and retired from the registries shall have been verified by an independent verifier who meets stringent levels of professional qualification (i.e., ANSI National Accreditation Board Accreditation Program for Greenhouse Gas Validation/Verification Bodies or a Greenhouse Gas Emissions Lead Verifier

accredited by CARB), or an expert with equivalent qualifications to the extent necessary to assist with the verification.

Without limiting the generality of the foregoing, in the event that an approved registry becomes no longer accredited by CARB and the GHG offset credits cannot be transferred to another accredited registry, the project applicant shall comply with the rules and procedures for retiring and/or replacing offset credits in the manner specified by the applicable protocol or other applicable standards, including (to the extent required) by purchasing an equivalent number of credits to recoup the loss.

Locational Performance Standards: All GHG offset credits required to reduce the project's GHG emissions shall originate from the following geographic locations (in order of priority): (1) On-site GHG reduction measures or credits over and above which is already required or proposed as part of the 2025 Specific Plan project; (2) within the City of Brisbane outside of the Baylands Specific Plan area; (3) off-site, incorporated areas of San Mateo County; (4) off-site, unincorporated areas of San Mateo County; (5) off-site areas within nine-county Bay Area Region; and (6) off-site areas within the State of California. No GHG offset credits shall originate from off-site, out-of-state or international areas. As listed, geographic priorities would focus first on local reduction options to ensure that reduction efforts achieved locally would provide cross-over, co-benefits to other environmental resource areas.

For purposes of implementing this mitigation measure, the City shall require the GHG offset credits to adhere to the following locational performance standards in order to reduce the project's construction and operational GHG emissions:

i) The project shall use all available GHG offset credits within the City of Brisbane or San Mateo County (the first priority is within incorporated areas of the County and the second priority is within unincorporated areas of the County). "Available," for purposes of this subdivision, means that the project applicant provide objective, verifiable evidence to the City documenting that such GHG offset credits are available for retirement from GHG offset credit projects within the subject geography no later than at the time of application for grading permit issuance. The objective, verifiable evidence to be provided includes a market survey report that shall comply with the following content requirements:

   a. Preparation by a GHG offset credit broker with a minimum of 10 years of experience assisting with transactions in emissions markets;

   b. Identification of the carbon registry listings reviewed for GHG offset credit availability, including the related date of inquiry; and,

c. Identification of the geographic attributes of GHG offset credits that are offered for sale and available for retirement.

ii) In the event that a sufficient quantity of GHG offset credits are not "available" in San Mateo County, the project applicant shall obtain the remaining GHG offset credits needed from within the nine-county Bay Area region (third priority). For the definition of "available," see subdivision "i)" immediately above.

iii) In the event that a sufficient quantity of GHG offset credits are not "available" in the nine-county Bay Area region, the project applicant shall obtain the remaining GHG offset credits needed from within the State of California (third priority). For the definition of "available," see subdivision "i)" immediately above.

iv) In the event that a sufficient quantity of GHG offset credits are not "available" in San Mateo County or the State of California, the project applicant shall obtain the remaining GHG offset credits needed from within the United States (fifth priority). For the definition of "available," see subdivision i) immediately above.

In the unlikely event that an approved registry becomes no longer approved by CARB and the GHG offset credits cannot be transferred to another CARB-approved registry, the project applicant shall comply with the rules and procedures for retiring and/or replacing offset credits in the manner specified by the applicable protocol, standard, or methodology, including (to the extent required) by purchasing an equivalent number of credits to recoup the loss.

Emissions Inventory "True Up" Procedures and Standards: As new federal, state and local regulations are adopted or technological advancements occur, the quantity of GHG emission reductions needed to demonstrate achievement of the no net increase in GHG emissions may decrease. Therefore, the amount of GHG offset credits needed may be reduced if the Applicant can demonstrate, with substantial evidence, that changes in regulation or law, or other increased technological efficiencies have reduced the total CO_2e emitted by the Project. As described further in the following paragraph, any modification to the emissions reduction value stated herein shall require approval from the City of Brisbane Community Development Director or the Director's designee, as considered pursuant to a noticed public hearing process that complies with applicable legal requirements, including those set forth in CEQA for the post-approval modification of mitigation implementation parameters.

Specifically, if the Applicant elects to process a "true-up" exercise subsequent to the City's certification of the Final EIR and approval of the Project, the Applicant

shall provide an updated operational GHG emissions inventory for the Project that includes emissions from mobile sources, energy, area sources, water consumption, and solid waste. Mobile sources must include off-road equipment, on-road vehicles (on-site and off-site), and rail. Subject to the satisfaction of the City of Brisbane Community Development Director or the Director's designee, these calculations shall be conducted using a City-approved model and/or methodology and must validate the continuing adequacy of modeling inputs used in the EIR that are not proposed to be altered as part of the "true-up" exercise. The inclusion of the validation requirement ensures that any updated operational GHG emissions inventories for the Project fully account for then-existing information that is relevant to the emissions modeling. For additional detail and requirements on the "true-up" exercise, see subsection 4.c Emissions Inventory "True Up" Compliance below.

The "true up" operational GHG emissions inventory, if conducted, will be provided in the form of a Project-wide GHG Emissions Reduction Plan (GHG Plan) to the City of Brisbane Community Development Director or the Director's designee prior to the issuance of building permits for the next build-out phase. The subject technical documentation shall be prepared by a City-approved, qualified air quality and greenhouse gas technical specialist.

In all instances, substantial evidence must confirm that any reduction to the total GHG offset credits value as identified in the certified EIR for the Project is consistent with the commitment to achieve a no net increase in GHG emissions for the 30-year life of the Project.

Reporting and Enforcement: On an annual basis, by March 1 of each year, the project applicant shall submit a letter to the City of Brisbane Sustainability Manager or the Manager's designee confirming implementation of the emission reduction strategies listed in the GHG reduction plan and this EIR.

In addition, before the City issues the final certificate of occupancy for the first building constructed in each phase, the applicant shall provide copies of GHG offset credit contracts demonstrating required purchases, along with records of their retirement, to the Community Development Director or the Director's designee.

For purposes of demonstrating that each GHG offset credit is additional, real, permanent, quantifiable, verifiable and enforceable, the reports shall include (i) the applicable protocol(s) and methodologies associated with the GHG offset credits; (ii) the third-party verification report(s) and statement(s) affiliated with the GHG offset credit projects; (iii) the unique serial numbers assigned by the registry(ies) to the GHG offset credits to be retired, which serves as evidence that the registry has determined the GHG offset credit project to have been

implemented in accordance with the applicable protocol or methodology and ensures that the GHG offset credits cannot be further used in any manner; and (iv) the locational attributes of the GHG offset credits. The reports also shall append the market survey report described in the "Locational Performance Standards" provision above.

If the City determines that the project's GHG offset credits do meet the requirements of this mitigation measure, the GHG offset credits can be used to reduce project GHG emissions and project permits shall be issued. Upon an affirmative finding from the City that the project's GHG offset credits are eligible for use under this measure, and prior to permit issuance, the City shall confirm that the project applicant has included, in their GHG offset credit agreement(s), a requirement that the GHG offset credit seller(s) provide the City with reasonable notice of any emissions reversal from the GHG offset credits that are the subject of the transaction(s). The City also shall confirm that the project applicant's purchase agreement(s) requires the seller(s) to provide the City with information and evidence regarding the steps taken by the applicable registry(ies) and GHG offset credit project developer(s) to rectify any reversal in accordance with applicable program manuals, protocols, and methodologies, and provide supporting documentation from the registry(ies) to substantiate the correction of the reversal. In the event that the City concludes a GHG offset credit reversal has not been sufficiently corrected within a reasonable period of time based on the nature of the reversal and the standards set forth in the applicable program manuals, protocols and methodologies, the City shall require that an equivalent quantity of substitute GHG reductions are achieved. Methods to achieve the reductions could include requiring the project applicant to secure and retire substitute GHG offset credits meeting the requirements of this mitigation measure in a quantity equivalent to those reversed.

If the City determines that the project's GHG offset credits do not meet the requirements of this mitigation measure, the offsets cannot be used to reduce project GHG emissions and project permits shall not be issued. Additionally, the City may issue a notice of non-consistency and cease permitting activities in the event that the City determines the GHG offset credits provided to reduce project GHG emissions are not compliant with the aforementioned standards. In the event of such an occurrence, project permitting activities shall not resume until the project applicant has demonstrated that the previously provided GHG offset credits are compliant with the standards herein *or* have provided substitute GHG offset credits achieving the standards of this mitigation measure in the quantity needed to achieve the required emission reduction.

This will serve as documentation to fully enforce the provision that the project will result in net-zero GHG emissions for the Specific Plan's 30-year project life.

Emissions Inventory "True Up" Compliance Reporting

(i) ***General Requirements.*** If the Applicant chooses to prepare a Project-wide GHG Emissions Reduction Plan (GHG Plan), pursuant to section 3) *Emissions Inventory "True Up" Procedures and Standards* above, the Project sponsor shall retain a qualified air quality consultant to develop the GHG Plan for implementation over the life of the Project in accordance with the requirements of this mitigation measure.

The GHG Plan shall quantify, using the most current information available, operational GHG emissions for the life of the Project (defined as 30 years of operation). The Plan shall specify anticipated GHG emission reduction measures sufficient to reduce or offset these emissions in accordance with the standards set forth above, such that the resulting GHG emissions are below the City's "no net increase" threshold of significance pursuant to CEQA.

For each phase or sub-phase of development, the Plan shall be updated as set forth in greater detail below. At all times throughout the life of the Project, the GHG Plan shall demonstrate that all operational activities are below the City's "no net increase" threshold of significance pursuant to CEQA for (1) operational activities already completed, permitted, and being proposed for permitting; and (2) anticipated future operational activities.

The City shall retain the services of a third-party expert to assist with the City's review and approval of the GHG Plan. The third-party expert shall also assist the City with its review and approval of updates to the GHG Plan and Progress Reports, as described below. All costs relating to the third-party expert, including City review of its services, shall be paid by the Applicant.

The GHG Plan shall identify GHG Emission Reduction Measures that shall be implemented to achieve the "no net increase" CEQA significance threshold. Measures shall be verifiable and feasible to implement, and the Plan shall identify the person/entity responsible for each measure, each measure's reduction amount, and the person/entity responsible for monitoring that reduction, all subject to review and approval by the City. The GHG Plan shall also identify the required number of GHG offset credits to achieve the "no net additional" threshold.

(ii) ***Additional Emission Reduction Measures.*** The following types of measures may be included in the GHG Plan, as necessary, to meet the

requirements of this mitigation measure and the "no net increase" GHG emissions requirement for the Project:

(1) *Additional or substitute measures and technology to reduce GHG emissions from Project construction or operations that are not currently known or available:* this may include new energy systems (such as battery storage), new transportation systems (such as autonomous vehicle networks), or other technology (such as carbon capture and storage) that is not currently available at the project-level, provided that the GHG Plan demonstrates to the City's satisfaction that such measures are equally or more effective as existing available measures, including those described above and listed in Mitigation Measures MM GHG-1a through MM GHG-1d.

Significance Conclusion for Impact GHG-1 with Implementation of all Mitigation Measures

As discussed below, even with implementation of identified GHG and Air Quality mitigation measures, Baylands development would result in a net increase in GHG emissions compared to existing Specific Plan area land uses.

Implementation of Air Quality Mitigation Measures MM AQ-1e through MM AQ-1l, along with Greenhouse Gas Mitigation Measure MM GHG-1d, would result in a quantifiable reduction of GHG emissions by approximately 4,138 $MTCO_2e$ per year (refer to Appendix H.1) After subtracting this estimated reduction from the emissions shown in **Table 4.10-5**, Baylands development would still exceed the net-zero threshold for Specific Plan area land uses. Other mitigation measures (Air Quality Mitigation Measures MM AQ-1a, MM AQ-1b, MM AQ-1c, MM AQ-1f, MM AQ-1j, and MM AQ-1k, along with Greenhouse Gas Mitigation Measures MM GHG-1a, MM GHG-1b, MM GHG-1c, and MM GHG-1e) for which an estimated reduction is not readily quantifiable along with the regional VMT reduction identified in Section 4.8, *Transportation*, would only achieve marginally more reductions, and Baylands GHG emissions would remain above the GHG-1 net-zero increase threshold for Specific Plan area land uses.

Thus, the only remaining feasible measure to achieve the "net-zero" GHG emissions threshold[223] would be implementation of the GHG emissions offset program set forth in Mitigation Measure MM GHG-1e. MM GHG-1e, GHG Offset Credits, requires monitoring, including submittal of an annual report to the City along with copies of GHG offset credit contracts and records documenting their retirement. This documentation must include proof that each GHG offset credit is additional, real, permanent, quantifiable, verifiable, and enforceable. If the City determined that any proposed GHG offset credits would not meet the

[223] "Net zero" GHG emissions as no increase in Baylands GHG emissions, including the Specific Plan's 30-year amortized construction plus its new operational GHG emissions.

requirements of Mitigation Measure GHG-1e, the GHG offset credits could not be used to reduce GHG emissions and permits for such development would not be issued.

Also, if total lifetime project emissions from operations and construction were to exceed the total estimated in **Table 4.10-6**, additional emission reductions would be required before the City would issue a certificate of occupancy. The modeling conducted for the Specific Plan uses conservative assumptions about the project's construction and operational activities that would generate emissions and did not incorporate the effects of some regulations, laws, and technology improvements that are either already adopted or approved, are proposed for adoption, or are likely to occur in the future.[224]

However, implementation of a large-scale GHG offset credit program such as required by Mitigation Measure GHG-1e would be difficult given the large number of GHG offset credits required, their locational parameters, the timing of their purchase and retirement, and their future availability. For example:

- Based on the modeling conducted in this EIR, over 1.5 million GHG offset credits would be needed for the Specific Plan to achieve the GHG-1 net zero GHG emissions threshold for Specific Plan area land uses. These GHG offset credits are required to be purchased and retired between the first phase of construction permits and the last phase of operational permits. The specific timing of the purchasing and retirement of these GHG offset credits cannot be known at this time, nor can the availability of GHG offset credits in the required amount be guaranteed.
- All GHG offset credits must be purchased from projects within California, with a priority placed on GHG offset credits close to the project site. The future availability of GHG offset credits within California in the quantity required to achieve net zero GHG emissions for the Specific Plan cannot be guaranteed.

Because the availability of GHG offset credits at the time they need to be purchased is uncertain, achieving a net zero increase in Baylands emissions cannot be guaranteed.

Impact GHG-1 would therefore be significant and unavoidable.

[224] Among the specific approved regulatory requirements not accounted for in the modeling are CARB's Zero-Emission Vehicle Program (EO B-16-2012), CARB's Advanced Clean Trucks regulation, the California Department of Transportation/CARB California Sustainable Freight Action Plan, California's carbon-neutral goal by 2045 (EO B-55-18), and AB 630/CARB's Clean Cars 4 All program. Among the regulations and legislation proposed but not accounted for in the modeling are CARB's 2020 Mobile Source Strategy, CARB's Zero Emission TRU rule, future updates to Title 24 energy efficiency standards, and CARB's Heavy-Duty Omnibus Regulation.

b. Impact GHG-2: Effect on Regional GHG Emissions

Methodology for Determining Significance

The analysis of Impact GHG-1 quantified the net increase in mobile source emissions that proposed Specific Plan area land uses would generate. The analysis of Impact GHG-2 differs from GHG-1 in that the following analysis focuses on the Specific Plan's effect on regional GHG emissions based on the regional vehicle miles traveled (VMT) analysis prepared for Section 4.8, *Transportation*, and qualitatively evaluates this effect on regional GHG emissions from mobile sources.[225]

As discussed in relation to Impact POP-1, the 2,200 dwelling units, 6.5 million square feet of commercial, and 500,000 square feet of hotel use proposed in the Specific Plan are consistent with the General Plan and represent planned growth. Consistent with the VMT analysis undertaken in Section 4.8, the anticipated future 4,905 Baylands residents and 19,480 employees are already accounted for in Plan Bay Area 2050 regional growth projections and therefore would not represent GHG emissions sources in addition to those projected for the nine-county Bay Area region. As discussed in Plan Bay Area 2050, "Between now and 2050, best estimates suggest the Bay Area's population will rise from nearly 8 million to over 10 million residents and that the number of jobs withing the nine counties will climb from 4 million to more than 5 million" (ABAG and MTC 2021). Plan Bay Area 2050 further recognizes that new housing must be provided to achieve the state's climate goals.

There is also evidence that the existing housing shortage within the Bay Area region is contributing to longer commutes and higher VMT. Plan Bay Area 2050 explains that "planning for enough new housing to ensure that strong job growth is not met with an increase in the number of long-distance commuters … Transportation and environmental strategies that support active and shared modes, combined with a transit-supportive land use pattern, are forecasted to lower the share of Bay Area residents that drive to work alone … [and] Greenhouse gas emissions from transportation would decrease significantly as a result of these transportation and land use changes" (ABAG and MTC 2021). This concept is recognized by the legislature itself, which has explained that "the lack of housing … is a critical problem that threatens the economic, environmental, and social quality of life in California … Among the consequences of those actions are … urban sprawl, excessive commuting, and air quality deterioration … and undermining the state's environmental and climate objectives" (Gov. Code § 65589.5). The Housing Crisis Act of 2019 ("SB 330") notes that the lack of housing is

[225] The regional VMT analysis undertaken in Section 4.8 quantified regional VMT with Baylands development to regional VMT without Baylands development assuming that the Specific Plan's proposed residential and commercial development would be spread between San Francisco and San Mateo County using the same total regional growth forecast as Plan Bay Area 2050 for the nine-county Bay Area region. See Section 4.8 and the Baylands Transportation Impact Analysis (Appendix F.1) for additional information.

"[i]ncreasing greenhouse gas emissions from longer commutes to affordable homes far from growing job centers" (SB 330 Finding 12(B)).

A 2021 analysis by the San Francisco Bay Area Planning and Urban Research Association (SPUR) revealed a shortfall of nearly 700,000 housing units between 2000 and 2018 (San Francisco Bay Area Planning and Urban Research Association. 2021). This shortage has been exacerbated by a focus on market-rate and luxury developments rather than affordable housing and has resulted in longer commutes for many residents and commuters. As people move further away from urban centers to find affordable housing, they often face longer travel times to get to work (UCITS 2019). Longer commutes contribute to higher VMT, as more people rely on cars for their daily travel. Studies have shown that high housing costs and the resulting longer commutes are significant factors in increasing VMT (Islam and Saphores 2024).

Further, the 2022 Scoping Plan and Plan Bay Area 2050 support infill housing as the type of development that will reduce VMT and support the state's and region's climate goals. As stated in the Scoping Plan:

> "Accelerating housing production to meet the extraordinary need for more homes can help reduce vehicle miles traveled (VMT) and GHG emissions… Increasing housing opportunities in transportation-efficient locations is a necessary paradigm shift and is part of the State's GHG emission reduction strategy" (CARB 2022, Appendix D, Local Actions).

The 2022 Scoping Plan also describes how transit-oriented and transportation-efficient development reduces VMT and GHG emissions:

> "Climate-smart locations include neighborhoods, commercial corridors, town centers, downtowns, and other areas where residents have access to a broad range of mobility options in addition to private automobiles (such as transit, walking, and biking), as well as where residents have access to housing, jobs, and other key destinations. Such communities make it possible for residents to live, work, and recreate without dependence on a personal car. For trips where driving is required, car trips can be relatively short and public infrastructure should support the use of zero-emission vehicles… the State has long been clear that urban infill projects, particularly in high-resource and low-VMT areas, would be generally supportive of the State's climate and regional air quality goals" (CARB 2022, Appendix D, Local Actions).

Impact Assessment

The Specific Plan's VMT characteristics were analyzed in Impact TRA-1. As shown in **Table 4.8-11**, the Specific Plan's location in relation to transit, its mix of land uses, and implementation of TDM programs result in substantially lower per capita VMT than the regional average for Specific Plan area employees and workers. The Specific Plan's per capita

VMT was also analyzed on a regional basis, comparing cumulative future 2040 regional VMT with and without the Specific Plan development.[226] As indicated in **Table 4.8-12**, the Baylands Specific Plan would reduce future cumulative 2040 daily regional VMT by 80,000 miles at buildout (105,000 miles with construction of Candlestick interchange improvements).

Because Baylands residential and employment growth is consistent with Plan Bay Area 2050 growth projections, the vehicle miles travelled and GHG emissions associated with Baylands residents and employees would not be in addition to projected regional GHG mobile emissions within the state or region. In addition, because per capita vehicle miles traveled for Baylands residents and employees would be more than 35 percent less than the regional average with implementation of required TDM measures for the Baylands as indicated in **Table 4.8-11** and future cumulative 2040 regional VMT would be reduced by 80,000 to 105,000 miles as indicated in **Table 4.8-12**, it is reasonable to conclude that Specific Plan development would also result in a decrease in mobile GHG emissions.

A reduction in average daily regional light-duty VMT of 80,000 miles throughout the Bay Area region in 2040, assuming regional average mobile emission rates for light-duty vehicles based on CARB's EMFAC2021 model, could result in over 7,000 $MTCO_2e$ reduced per year as a result of the project. Further, the Baylands building-related emissions are likely to also be lower than average existing and future buildings within the region because the project would achieve zero-carbon buildings, be all-electric, rely on 100 percent carbon-free electricity, meet CALGreen Tier 1 voluntary energy efficiency standards, and supply over 50 percent of on-site electricity demand with on-site solar energy production. This could result in a regional average decrease in building-related emissions if Baylands buildings were displacing existing and future building operations. Consequently, when considering the reduction in future regional mobile source GHG emissions and the potential reduction in future regional building GHG emissions, the project would result in a net reduction in regional GHG emissions overall.

Significance Conclusion for Impact GHG-2

Because the 2025 Specific Plan project would not increase and would likely reduce regional GHG mobile source emissions, Impact GHG-2 would be less than significant.

[226] The cumulative future 2040 without Specific Plan scenario assumes that the 2,200 dwelling units, 6.5 million square feet of commercial development, and 500,000 square feet of hotel use proposed for the Specific Plan would occur outside of the Baylands within San Francisco and San Mateo County.

c. Impact GHG-3: Consistency with Applicable Greenhouse Gas Emissions Reduction Plans, Policies, Performance Standards, and Regulations

Methodology for Determining Significance

BAAQMD 2022 CEQA Thresholds Consistency Analysis Methodology

To evaluate potential conflicts with the BAAQMD's 2022 *CEQA Thresholds for Evaluating the Significance of Climate Impacts*, the EIR generally follows the BAAQMD recommendation for land use projects endorsed by the California Supreme Court in *Center for Biological Diversity v. Department of Fish & Wildlife* (2015) (62 Cal.4th 204). As the California Supreme Court held if a project would contribute its "fair share"[227] to achieve the long-term climate goals, then the lead agency can find that the impact would not be significant because the project would help solve the problem of global climate change (62 Cal.4th 220–223). Applying this approach, the BAAQMD has found that a new land use development project being built today that incorporates the design elements identified below would contribute its fair share toward achieving California's long-term climate goals and it would not result in a cumulatively considerable contribution to global climate change. Thus, in relation to the BAAQMD's 2022 *CEQA Thresholds*, the EIR analyzes whether the Specific Plan includes the following design elements:

- Buildings
    - The project will not include natural gas appliances or natural gas plumbing (in both residential and nonresidential development).
- The project will not result in any wasteful, inefficient, or unnecessary electrical usage as determined by analysis required under CEQA Section 21100(b)(3) and Section 15126.2(b) of the CEQA Guidelines.
- Transportation
    - Achieve compliance with electric-vehicle requirements in the most recently adopted version of CALGreen Tier 2 or the mandatory requirements of the most recently adopted version of the City of Brisbane building code, whichever is more stringent.
    - Achieve a reduction in project-generated vehicle miles traveled (VMT) below the regional average consistent with the current version of the California Climate

[227] The BAAQMD defines "fair share" as the design elements that need to be incorporated into a project to lay the foundation for achieving carbon neutrality by 2045. These design elements are elements over which the project has influence or control. For example, becoming carbon neutral by 2045 will require California's electrical power generators to shift to 100 percent carbon-free energy resources, which is not something that can be controlled through the design of new land use projects and would not be a part of a project's fair share. Other sources that would not be part of the "fair share" are vehicle fleet mix or indirect off-site emissions (e.g., methane emissions from wastewater or solid waste).

Change Scoping Plan or meet a locally adopted Senate Bill 743 VMT target, reflecting the recommendations provided in the Governor's Office of Planning and Research's Technical Advisory on Evaluating Transportation Impacts in CEQA.

If the Specific Plan would not incorporate these design elements, the project would obstruct the state's efforts to address climate change, and a significant impact would result.

Impact Assessment

Consistency with Bay Area Air Quality Management District CEQA Thresholds for Evaluating the Significance of Climate Impacts

The BAAQMD's *CEQA Thresholds for Evaluating the Significance of Climate Impacts* were published in April 2022 and identify building design and transportation elements that would be required of new land use development projects to achieve California's long-term climate goals.

Building Design Elements

Baylands Specific Plan development would not include natural gas infrastructure, plumbing, or appliances. In addition, laboratory and other research and development uses within the Baylands would be permitted to use on-site propane tanks only on an as-required basis.[228] With respect to electrical energy and building design, because residential and nonresidential buildings would comply with CALGreen Tier 1 voluntary standards and because the vast majority of electrical demand would be supplied from on- and off-site carbon free sources, building design would not result in a wasteful, inefficient, or unnecessary consumption of energy.

The Specific Plan proposes to comply with the CALGreen Code Tier 1 voluntary standards, which would ensure that buildings use energy and other resources efficiently. The Building Code and energy efficiency standards are reviewed every few years by the Building Standards Commission and the California Energy Commission and revised if necessary (Pub. Res. Code § 25402(b)(1)). The regulations are adopted with the goal of "[r]educing of wasteful, uneconomic, inefficient, or unnecessary consumption of energy" (Pub. Res. Code § 25402). Part 6 of Title 24 contains the 2022 Building Energy Efficiency Standards for new residential and non-residential buildings, which went into effect on January 1, 2023 (CEC 2022a). The 2022 Standards focus on efficient electric heat pumps, establishes electric-ready requirements for new homes, expands solar photovoltaic and battery storage standards, and strengthens ventilation standards. The Specific Plan requires a minimum of 85,000 MWh of electricity to be generated annually. To that end, a 55-acre solar farm will be developed east of the Caltrain right-of-way and south of Visitacion Creek along with building- and other ground-mounted solar

[228] Such gases are used for research purposes in scientific labs. For example, Bunsen burners offer unique heating characteristics which cannot be replicated by electric heating devices. Open flames are typically required to produce pipettes and related glassware and are required for certain types of chemical reactions and procedures.

installations. Based on the reasonably foreseeable mix of building types anticipated within the Baylands, actual renewable energy generation was estimated to be 92,445 MWh in the Baylands Energy Plan prepared by Thornton Tomasetti Inc. in May 2021.

Transportation Elements

As shown in **Table 4.10-7**, per-capita vehicle miles traveled by Baylands residents and workers would achieve reductions below the nine-county Bay Area average in excess of 35 percent. This reduction would be below the VMT reduction of at least 25 percent below 2019 levels by 2030 and 30 percent below 2019 levels by 2045 identified in the *Final 2022 Scoping Plan Update*.

Table 4.10-7: Per Capita Vehicle Miles Traveled, Existing and at Specific Plan Buildout

Land Use	Existing		Specific Plan Buildout		
	Baylands	San Francisco Bay Area Average	Baylands	Percent Below Baylands Existing	Percent Below Bay Area Average
Residential	N/Aa	12.8	8.0	N/A	37.5%
Employment	12.9	15.0	9.2	28.7%	38.7%

SOURCE: C/CAG Travel Demand Model; Fehr & Peers, 2023.

NOTES:

a. There is currently no residential land within the Baylands.

In addition, Baylands development would reduce regional vehicle miles traveled compared to the Regional Baseline Emissions wherein residential and commercial/office development that would otherwise have occurred within the Baylands is spread around the San Francisco Bay Area. As indicated in **Table 4.10-8**, development under the Specific Plan would reduce regional VMT within the nine-county Bay Area region, as determined in Section 4.8, *Transportation*.

Table 4.10-8: Effect of Baylands Development on Regional Vehicle Miles Traveled

	Regional Vehicle Miles Traveled Nine-County Bay Area Region	Would Baylands Development Increase VMT?
Cumulative 2040 VMT Without Baylands	197,771,000	
Cumulative 2040 VMT With Baylands		
• **No Candlestick Interchange**	197,691,000	No
• **With Candlestick Interchange**	197,666,000	No

SOURCE: C/CAG Travel Demand Model; Fehr & Peers, 2023.

NOTES: VMT results from C/CAG Travel Demand Model are presented in this table because the effect of the required TDM measures would further reduce VMT generated by the region but would be imperceptible for the results presented in this table at the scale of the 9-County Bay Area region.

The BAAQMD CEQA threshold also indicates compliance with CALGreen Tier 2 off-street EV requirements. The applicant provided an estimate of proposed off-street EV charging spaces, both with and without all necessary charging equipment to qualify as an electrical vehicle charging station (EVCS). A comparison of these estimates with the CALGreen Tier 2 voluntary

EV charging requirements indicates that, while the project would meet Tier 2 requirements with respect to single family housing, it would be below the requirements for multifamily residential and non-residential uses. Thus, Specific Plan development would not be consistent with BAAQMD CEQA thresholds in relation to EV charging spaces.

Consistency with AB 1279 and the 2022 Scoping Plan

AB 1279 and the CARB *2022 Scoping Plan for Achieving Carbon Neutrality* provide for reducing anthropogenic GHG emissions to 85 percent below 1990 levels and achieving carbon neutrality by 2045 or sooner. **Table 4.10-9** shows relevant actions of the 2022 Scoping Plan Update and correlates each action with elements of the Baylands Specific Plan that serve to address the action.

Table 4.10-9: Consistency of the Baylands Specific Plan with the 2022 Scoping Plan

2022 Scoping Plan Action	Specific Plan Elements
Increase in Renewable Energy and Decrease in Oil and Gas Use Actions	The Specific Plan would generate 92,445 MWh of solar energy from on-site solar panels, and the remaining energy demand would be sourced from PCE, which includes 100% renewable sources. While PCE customers can opt out of this program, only 2.5% of current customers elect to opt out. Furthermore, under state Renewable Portfolio Standard (RPS) requirements, all electricity generated after 2045 would be carbon free. Furthermore, the project would lower regional VMT and per capita VMT for the Bay Area. Therefore, the project would not obstruct the Scoping Plans efforts to increase renewables and decrease oil and gas use. Additionally, distributed battery storage within the Baylands would enable all of the energy generated within the Baylands to be used within the site regardless of the time of day it is generated.
Low Carbon Fuels Actions	The 2022 Scoping Plan identifies this action measure to be implemented through AB 197 as it directs emissions reductions for sources covered by the AB 32 Inventory. Therefore, it is not an action to be directly implemented through local development. However, the Specific Plan would be required to support this measure through required compliance with the City of Brisbane's Building Code as it pertains to electric vehicle charging infrastructure and, accordingly, would not impede the realization of this Action.
Expansion of Electrical Infrastructure Actions	Electricity to power the Baylands Specific Plan area would be generated by on-site solar panels installed on buildings, in parking areas, and in a solar farm required within the southeastern portion of the site. Distributed battery storage would extend the reliability and resiliency of on-site renewable electricity generation and a proposed 250 MW utility scale battery storage, if it is ultimately developed within the Baylands, would enhance extend the reliability and resiliency of off-site renewable energy at times when generation exceeds demand.
Climate Ready and Climate-Friendly Buildings	The Sustainability Framework of the Specific Plan describes strategies and standards for creating "zero carbon buildings" that conserve energy and water, establishing resiliency in light of projected sea level rise adaptation and providing for sustainable infrastructure development, as well as addressing other sustainability factors.
Expanded Use of Zero-Emission Mobile-Source Technology Actions	The Specific Plan would support this Action through required compliance with the City of Brisbane's recently adopted Building Code as it pertains to electric vehicle charging infrastructure and, accordingly, would serve to implement this Action.

2022 Scoping Plan Action	Specific Plan Elements
Mechanical Carbon Dioxide Removal and Carbon Capture and Sequestration Actions	Carbon capture and mechanical carbon dioxide removal technology is still in development and not yet commercially available. The Specific Plan provides for 64.4 acres of landscape parkland and 78.4 acres of habitat conservation and restoration, including wetlands, grasslands, coastal scrub, and woodland. Additionally, large evergreen shrubs and trees would be planted along Baylands roadways. All of these plantings would serve to sequester carbon. The Specific Plan would not hinder further development of carbon capture technology and would provide for restoration of habitats that promote carbon sequestration.
Forest, Shrubland, and Grassland Management Actions	A total of 78.4 acres of land within the Specific Plan would be devoted to habitat conservation and restoration, including wetlands, grasslands, coastal scrub, and woodland. Overall, a total of 156.8 acres of the site's (27.8 percent) 563.5-acre land area remaining after a projected 6.9 feet of sea level rise through 2100 would be preserved as open space.
Agricultural Actions	The Baylands Specific Plan permits development of a small urban farm or community garden adjacent to Icehouse Hill to grow organic produce for use in the Baylands or other Brisbane neighborhoods. Furthermore, operation of the specific plan could include a local farmers' market that would encourage tenancies by and permits for food retailers, restaurants, and food trucks, with preferential participation by local food producers.
Organic Waste Diversion and Composting Actions	Recology provides solid waste collection, recycling, and disposal services for residential and commercial customers in San Francisco and the Baylands through a three-cart collection program that requires, under San Francisco's Mandatory Recycling and Composting Ordinance, customers to sort solid waste into recyclables; compostable items, such as food scraps and yard trimmings; and garbage. Recology's 78 percent diversion rate is slightly greater than that achieved in other parts of Brisbane (76 percent) and the State's goal of 75 percent waste diversion by 2020 (City of Brisbane 2024). Chapter 15.75 of the Brisbane Municipal Code requires that a minimum of sixty-five percent (65 percent) of the nonhazardous construction and/or demolition waste and one hundred percent (100 percent) of inert solid material associated with excavations and land clearing operations, including trees, stumps and rocks be recycled and/or salvaged for re-use. Recology is also committed to implementing a zero-waste program for the Baylands. In addition, information regarding waste segregation requirements, including at minimum segregation of recyclable and compostable waste (green waste), would be provided to new owners, lessees, and renters
Afforestation, Urban Forestry Expansion, Urban Greening, Avoided Natural and Working Land Use Conversion, and Wetland Restoration Actions	A total of 78.4 acres of land within the Specific Plan would be devoted to habitat conservation and restoration, including wetlands, grasslands, coastal scrub, and woodland. Overall, a total of 156.8 acres of the site's (27.8 percent) 563.5-acre land area remaining after a projected 6.9 feet of sea level rise through 2100 would be preserved as open space. Habitat conservation and enhancement on Icehouse Hill would be specifically designed to increase the extent and quality of habitat for sensitive butterfly species.
Reduced VMT Actions	The Specific would implement a transportation demand management (TDM) plan consistent with the City's TDM ordinance. Potential TDM measures include transit accessibility, proximity of amenities, proximity of employment opportunities, an extensive bicycle network, a bikeshare program, provision of minimal automobile parking, preferential EV and carpool parking, provision of bicycle parking, and implementation of transit accessibility. The TDM measures would reduce vehicle trip generation by 16.4 percent. Resulting per capita VMT for Baylands residents' and workers' home to work trips would be more than 30 percent below the existing average for the nine-county Bay Area region.

2022 Scoping Plan Action	Specific Plan Elements
Provides EV charging infrastructure that, at minimum, meets the most ambitious voluntary standard in the California Green Building Standards Code at the time of project approval	The applicant provided an estimate of proposed off-street EV charging spaces, both with and without all necessary charging equipment to qualify as an electrical vehicle charging station (EVCS). A comparison of these estimates with the CALGreen Tier 2 voluntary EV charging requirements indicates that, while the project would meet Tier 2 requirements with respect to single family housing, it would be below the requirements for multifamily residential and non-residential uses. Thus, Specific Plan development would not be consistent.
Is located on infill sites that are surrounded by existing urban uses and reuses or redevelops previously undeveloped or underutilized land that is presently served by existing utilities and essential public services (e.g., transit, streets, water, sewer)	The Baylands Specific Plan area is one of the largest underdeveloped locations in the central Bay Area and is surrounded by existing urban development to the north, west, and south (San Francisco Bay is located east of the Baylands). The Baylands comprises the San Mateo County portion of the Bi-County Priority Development Area designated by Plan Bay Area 2050 along with large-scale redevelopment aeras to the north in San Francisco. The Specific Plan is served by two interchanges along the US 101 freeway along with a network of existing highways and roadways. The Specific Plan area is also served by existing water and sewer infrastructure that would need to be upgraded to serve future development.
Does not result in the loss or conversion of natural and working lands	The Scoping Plan defines natural and working lands as forests, shrublands/chaparral, croplands, and wetlands. The Specific Plan site primarily consists of a former Southern Pacific railroad maintenance yard and the former Brisbane landfill. A total of 78.4 acres of land within the Specific Plan would be devoted to habitat conservation and restoration, including wetlands, grasslands, coastal scrub, and woodland. There are no agricultural or forestry resources within the Baylands or City of Brisbane. The existing Mission Blue Nursery, which propagates natural plant materials for habitat restoration and enhancement projects in the San Bruno Mountain area would be relocated to Icehouse Hill as part of Specific Plan development.
Consists of transit-supportive densities (minimum of 20 dwelling units per acre), or is in proximity to existing transit stops (within a half mile), or satisfies more detailed and stringent criteria specified in the region's SCS	The Baylands Specific Plan area has been designed as a Priority Development Area (PDA) in Plan Bay Area 2050. PDAs are defined as "areas generally near existing job centers or frequent transit that are locally identified (i.e., identified by towns, cities, or counties) for housing and job growth." The Specific Plan establishes a maximum permitted number of dwelling units for each residential block that, on average, exceeds an allowable 35 dwelling units per acre maximum and/or a minimum density of 25 dwelling units per acre within ½ mile of the Caltrain Bayshore Station.
Reduces parking requirements by: Eliminating parking requirements or including maximum allowable parking ratios (i.e., the ratio of parking spaces to residential units or square feet); or providing residential parking supply at a ratio of less than one parking space per dwelling unit; or for multifamily residential development, requiring parking costs to be unbundled from costs to rent or own a residential unit	Mandatory TDM Measures to be implemented by the Specific Plan (Per Tier 3 of Brisbane TDM Ordinance, §10.52.070) include: • Measure J: Right-Size Parking Supply • Measure M: Paid Parking or Parking Cash-out.
At least 20 percent of units included are affordable to lower-income residents	Existing City ordinance would require Baylands development to provide a minimum of 15% of its housing production at rates affordable to lower income households unless a higher percentage is negotiated as part of a Development Agreement.
Results in no net loss of existing affordable units	There are no existing residential units within the Specific Plan area.

2022 Scoping Plan Action	Specific Plan Elements
Uses all-electric appliances without any natural gas connections and does not use propane or other fossil fuels for space heating, water heating, or indoor cooking	The Specific Plan requires new development to be all electric. Existing uses adjacent to the Specific plan area would continue having access to natural gas infrastructure.

SOURCES: CARB 2022; Baylands Specific Plan, 2053.

NOTES: 2022 Scoping Plan = *2022 Scoping Plan for Achieving Carbon Neutrality*; CALGreen Code = California Green Building Standards Code; City = City of Brisbane; EV = electric vehicle; GWP = global warming potential; MPOA = Master Property Owners' Association; MWh = megawatt-hours; TDM = transportation demand management; VMT = vehicle miles traveled

As shown in the table above, the Specific Plan would not obstruct implementation of relevant Scoping Plan actions to reduce GHG emissions related to VMT reduction and building decarbonization per the CARB 2022 Climate Change Scoping Plan, except related to EV charging spaces.

Significance Conclusion for Impact GHG-3

The Baylands Specific Plan is consistent with many but not all applicable greenhouse gas emissions reduction plans, policies, performance standards, and regulations.

- Baylands development would be consistent with most performance metrics contained in the BAAQMD's CEQA Guidelines.
    - Natural gas service would not be extended to any new residential or nonresidential development.[229] The Specific Plan commits to operating with 100 percent renewable energy along with all electric buildings, a minimum of 85,000 MWh of on-site renewable energy generation, and 30 MW of distributed battery storage.
    - As documented in Section 4.11, *Energy Resources*, Impact EN-1, Baylands development would not result in wasteful, inefficient, or unnecessary energy usage.
    - As documented in Section 4.8, *Transportation*, the Specific Plan would, with implementation of required transportation demand management programs result in per capita VMT for Baylands residents and employees more than 35 percent below the nine-county regional average for the Bay Area and reduce regional vehicle miles traveled consistent with achieving state-wide GHG reduction goals.
    - While not meeting all voluntary CALGreen Tier 2 electric vehicle EV requirements, the Specific Plan would provide a total of 6,924 parking spaces of the total maximum 11,000 parking spaces permitted by the Specific Plan with EV charging infrastructure.

[229] Existing uses that currently use natural gas and would remain at their current locations would be permitted to retain natural gas service.

- As demonstrated in **Table 4.10-9**, Baylands development would not obstruct implementation of relevant Scoping Plan actions to reduce GHG emissions related to VMT reduction and building decarbonization CARB 2022 Climate Change Scoping Plan, except related to EV charging spaces.
- As demonstrated in **Table 4.3-2**, the Baylands Specific Plan would be inconsistent with MTC's Transit-Oriented Communities Policy (Resolution No. 4530), which would increase the severity of the Specific Plan's significant GHG emissions impact.
- The Specific Plan is designated as a Priority Development Area in Plan Bay Area 2050 and is consistent with GHG reduction measures of its Sustainable Communities Strategy.

While the project is consistent with the majority of policies described above, it would not provide sufficient EV charging spaces necessary to achieve CAL Green Tier 2 voluntary standards. Therefore, this impact is significant.

Program EIR Mitigation Measures

No mitigation measures are being carried forward from the Program EIR.

Additional Mitigation Measures

Significance Conclusion for Impact GHG-3 with Implementation of All Mitigation Measures

The 2025 Specific Plan Project is consistent with many but not all applicable greenhouse gas emissions reduction plans, policies, performance standards, and regulations. It would not, however, obstruct implementation of relevant Scoping Plan actions to reduce GHG emissions related to VMT reduction and building decarbonization CARB 2022 Climate Change Scoping Plan. Revisions to the Specific Plan required by Mitigation Measure MM LUP-2 would ensure consistency with MTC's Resolution No. 4530 by requiring:

- Residential development within ½ mile of the Caltrain Bayshore Station to have a minimum average of 25 dwelling units per acre as measured on a block-by-block basis;
- Decreasing the maximum per unit parking ratio for Multi-Family Low, Townhome, and Duplex/Single Family housing types from 1.25 to 1.0 spaces per unit; and
- Requiring commercial office development within ½ mile of the Caltrain Bayshore Station to have an average minimum FAR of 2.0 as measured on a block-by-block basis.

Mitigation Measure MM AQ-1k requires that the applicant for development shall demonstrate compliance with the most current California Green Building Standards (CALGreen Code) Tier 2 voluntary electric vehicle (EV) charging requirements.

Implementation of Mitigation Measures MM LUP-2 and MM AQ-1k would achieve consistency with applicable Greenhouse Gas Emissions reduction plans, policies, performance standards, and regulations.

Mitigation Measure MM AQ-1k requires on-site development to comply with CALGreen Code Tier 2 vehicle charging standards within the Baylands. These energy-saving project elements would substantially reduce energy consumption compared to existing mixed land use developments throughout the region. Many of these energy benefits are not accounted for in the quantitative analysis provided with respect to Impact GHG-1.

Impact GHG-2 would be less than significant with mitigation incorporated.

4.10.7 REFERENCES – GREENHOUSE GAS EMISSIONS

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4.11 ENERGY RESOURCES

4.11.1 INTRODUCTION

a. Overview

This section assesses the generation, storage, and use of energy resources, including the change in energy consumption that would result from the Baylands Specific Plan. This section also examines whether the 2025 Specific Plan project includes "mitigation measures proposed to minimize significant effects on the environment, including, but not limited to, measures to reduce the wasteful, inefficient, and unnecessary consumption of energy." Refer to Section 4.9, *Air Quality*, for discussion of the relationship between energy consumption and air pollutant emissions; Section 4.10, *Greenhouse Gas Emissions*, for discussion of the relationship between energy consumption and greenhouse gas (GHG) emissions; and Section 4.16, *Utilities, Service Systems, and Water Supply*, for discussion of the relationship between energy consumption and (1) waste generation and (2) water consumption.

b. Definitions

British thermal unit (Btu) is a commonly used measure of the heat content of fuel and other energy sources. It is the amount of heat needed to raise the temperature of one pound of water by 1 degree Fahrenheit. Measured in terms of electricity, 1 kilowatt-hour equals approximately 3,400 Btu, while 1 cubic foot of natural gas equals just over 1,000 Btu and 1 therm of natural gas equals 100,000 Btu. One gallon of gasoline equals about 120,000 Btu.

Energy neutral means generating sufficient energy[230] on-site to meet the Specific Plan's demand for energy on an annual basis for:

- Buildings, outdoor lighting, streetlights, traffic signals, landscape irrigation, non-commercial on-site electric vehicle charging whose energy is metered as part of on-site buildings; and
- All on-site infrastructure such as operation of the on-site water storage tank and the water recycling facility.[231]

[230] Because the Baylands Specific Plan proposes new development to be all electric, on-site natural gas combustion would be limited to existing uses. Therefore, for purposes of this analysis, energy neutrality is equivalent to electricity neutrality. Energy neutrality does not include off-site energy consumption such as vehicle fuel use or embodied energy associated with water and wastewater.

[231] In relation to on-site water storage and water recycling facilities, "the Specific Plan's demand for energy" does not include energy used to provide potable or recycled water to uses outside of the Specific Plan area.

Watt, kilowatt, megawatt are measurements of energy capacity, or electrical power. In comparison, energy use is measured in watt-hours. For example, if a light bulb has a capacity rating of 100 watts (W), the energy required to keep the bulb on for 1 hour would be 100 watt-hours. If ten 100 W bulbs were on for 1 hour, the energy required would be 1,000 watt-hours or 1 kilowatt-hour. On a utility scale, the capacity of a generator is typically rated in megawatts (MW), which is 1 million watts, while energy usage is measured in megawatt-hours (MWh) or gigawatt-hours, which is 1 billion watt-hours.

Zero Net Energy, Building refers to an energy-efficient building where, on a source energy basis,[232] the actual annual consumed energy is less than or equal to the on-site renewable generated energy.

Zero Net Energy, Campus refers to an energy-efficient campus (e.g., site-specific development project) where, on a source energy basis, the actual annual consumed energy is less than or equal to the on-site renewable generated energy.

Zero Net Energy, Community refers to an energy-efficient community (e.g., Specific Plan area) where, on a source energy basis, the actual annual consumed energy is less than or equal to the on-site renewable generated energy.

4.11.2 PHYSICAL ENVIRONMENTAL SETTING

a. Baseline

The recirculated Notice of Preparation review period (spring 2023) is used to describe existing conditions and to analyze direct and indirect impacts of the Baylands Specific Plan.

b. State-Wide Energy Profile

Total energy usage in California was 6,822 trillion Btu in 2022 (the most recent year for which specific data are available), which equates to an average of 200 million Btu per capita per year. These figures place California second among the 50 states in total energy use and 48th in per-capita consumption. Of California's total energy usage, the breakdown by sector is roughly 42.6 percent transportation, 22.5 percent industrial, 17.4 percent commercial, and 17.6 percent residential. Electricity and natural gas in California are generally consumed by stationary users such as residences and commercial and industrial facilities, whereas petroleum-based fuel

[232] According to the U.S. Environmental Protection Agency's EnergyStar website, source energy "represents the total amount of raw fuel that is required to operate the building. It incorporates all transmission, delivery, and production losses." https://www.energystar.gov/buildings/benchmark/understand-metrics/source-site-difference. Accessed November 4, 2024.

consumption is generally accounted for by transportation-related energy use. **Table 4.11-1** summarizes state, PG&E, and San Mateo County energy use.

Table 4.11-1: Existing Annual State and Regional Energy Consumption, 2022

Source	State of California	PG&E	San Mateo County
Electricity[a]	287,826,110 MWh	104,694,979 MWh	
Natural Gas[b]	2,122,002,896 MMBtu	444,919,589MMBtu	
Gasoline[c]	13,640,000,000 gallons		265,000,000 gallons
Diesel[c]	2,290,000,000 gallons		15,000,000 gallons

SOURCES:

a. California Energy Commission, Electricity Consumption by County, 2023c, https://ecdms.energy.ca.gov/elecbycounty.aspx; California Energy Commission, Electricity Consumption by Planning Area. 2023d, https://ecdms.energy.ca.gov/elecbyplan.aspx.

b. California Gas and Electric Utilities, 2023 California Gas Report (Table 5), https://www.socalgas.com/sites/default/files/Joint_Biennial_California_Gas_Report_2023_Supplement.pdf; California Energy Commission, Gas Consumption by Planning Area, 2023e, https://ecdms.energy.ca.gov/gasbyplan.aspx.

c. California Energy Commission, 2023f California Retail Fuel Outlet Annual Reporting (CEC-A15) Results, 2022, accessed June 2024, https://www.energy.ca.gov/data-reports/energy-almanac/transportation-energy/california-retail-fuel-outlet-annual-reporting.

ABBREVIATIONS: MMBtu = million British thermal units; MWh = megawatt-hours; PG&E = Pacific Gas and Electric Company

California relies on a regional power system composed of a diverse mix of natural gas, renewable, hydroelectric, coal, and nuclear generation resources. In 2023, total electricity generation in California comprised 57.9 percent of non-GHG and renewable energy resources, with the remaining 42.1 percent generated by thermal and unspecified sources, including 36.6 percent natural gas, 1.7 percent coal, 0.01 percent oil, 0.07 percent waste heat/petroleum coke, and 3.7 percent unspecified (CEC 2024).

c. Electricity

Electricity, as a consumptive utility, is a man-made resource. The production of electricity for use in California currently requires the consumption or conversion of resources—including water, wind, oil, gas, coal, solar, geothermal, and nuclear resources—into usable energy. The delivery of electricity involves a number of system components for distribution to users through a network of transmission and distribution lines commonly called a power grid.

PG&E provides electrical and natural gas services to approximately 16 million people throughout its 70,000-square-mile service area across central, coastal, and Northern California, an area stretching from Humboldt County to the north to Kern County to the south (PG&E 2024). PG&E produces and purchases energy from a mix of conventional and renewable generating sources.

Approximately 38 percent of PG&E's 2022 electricity purchases were from renewable sources; for comparison the state-wide percentage of electricity purchases from renewable sources was approximately 36 percent (PG&E 2023). In 2022, PG&E delivered approximately 77,887,000 MWh to customers (CEC 2023d).

In Brisbane, electricity is procured by Peninsula Clean Energy (PCE), a Community Choice Aggregation program of San Mateo County and all of its cities and towns, as well as the City of Los Banos. PCE purchases electricity directly from generators, which is then delivered by PG&E over its existing utility lines within San Mateo County and the City of Brisbane. Residents and businesses of Brisbane have a choice of two electricity plans:

- ECOPlus, which offers nearly double the percentage of renewable energy as that of PG&E; and
- ECO100, which offers 100 percent renewable energy.

d. Natural Gas

Natural gas consumed in California is obtained from naturally occurring reservoirs and delivered through high-pressure transmission pipelines. Natural gas provides almost one-third of California's total energy requirements. Natural gas is measured in terms of both cubic feet and Btu.

PG&E provides natural gas transportation services to "core" customers and to "non-core" customers (industrial, large commercial, and natural gas–fired electric generation facilities) that are connected to its gas system in its service territory. Core customers can purchase natural gas procurement service (natural gas supply) from either PG&E or non-utility third-party gas procurement service providers (referred to as "core transport agents"). When core customers purchase gas supply from a core transport agent, PG&E still provides gas delivery, metering, and billing services to those customers. When PG&E provides both transportation and procurement services, PG&E refers to the combined service as "bundled" natural gas service. Currently, more than 95 percent of core customers, representing nearly 80 percent of the annual core market demand, receive bundled natural gas service from PG&E.

PG&E does not provide procurement service to non-core customers, who must purchase their gas supplies from third-party suppliers. PG&E offers backbone gas transmission, gas delivery (local transmission and distribution), and gas storage services as separate and distinct services to its non-core customers. Access to PG&E's backbone gas transmission system is available for all natural gas marketers and shippers, as well as non-core customers. PG&E also delivers gas to off-system customers (i.e., outside of PG&E's service territory) and to third-party natural gas storage customers.

e. Transportation Energy

Transportation accounted for nearly 37 percent of total energy consumption in California during 2020 (CARB 2022). In 2022, 13.6 billion gallons of gasoline and 2.2 billion gallons of diesel fuel were consumed in California (CEC 2022b). Petroleum-based fuels currently account for 89 percent of transportation fuel use in California (CEC 2018).

The state is developing flexible strategies to reduce petroleum use. Over the last decade, California has implemented several policies, rules, and regulations to improve vehicle efficiency, increase the development and use of alternative fuels, reduce air pollutants and GHG emissions from the transportation sector, and reduce VMT. Accordingly, total gasoline consumption in California has declined. The CEC predicts that the demand for gasoline will continue to decline over the next 10 years, and there will be an increase in the use of alternative fuels. According to fuel sales data from the CEC, fuel consumption in San Mateo County was approximately 265 million gallons of gasoline and 15 million gallons of diesel fuel in 2022 (CEC 2022b). Refer to **Table 4.11-1** for a summary of state-wide fossil fuel consumption in 2022.

f. Local Setting

Electricity is currently provided to the Specific Plan area through a mix of underground cables and overhead lines. Existing electrical infrastructure serving existing properties is primarily located within Tunnel Avenue. Along the eastern side of Tunnel Road in the former landfill area, PG&E overhead electrical lines serve the existing Golden State Lumber and Recology properties. Overhead electrical lines extend from the area between Brisbane's existing fire station and Icehouse Hill to Bayshore Boulevard. An existing 230-kV underground electrical transmission line runs beneath Bayshore Boulevard.

Current energy consumption within the Baylands is minimal and primarily related to small industrial uses within 18 buildings totaling 272,400 square feet along Industrial Way in the northwestern portion of the Specific Plan area. Some of these existing on-site uses would be removed and replaced by Specific Plan development; uses within "Existing Use Areas" and the Mission Blue Nursery, which would be relocated to Icehouse Hill, would remain and continue to consume energy.

4.11.3 REGULATORY CONTEXT FOR BAYLANDS DEVELOPMENT

a. Federal Laws, Plans, Programs, and Regulations

National Energy Conservation Policy Act

The National Energy Conservation Policy Act serves as the underlying authority for federal energy management goals and requirements. Signed into law in 1978, the Act has been regularly updated and amended by subsequent laws and regulations. This law is the foundation of most federal energy requirements. The Act established energy-efficiency standards for consumer products and includes a residential program for low-income weatherization assistance, grants and loan guarantees for energy conservation in schools and hospitals, and energy-efficiency standards for new construction. Initiatives in these areas continue today.

Energy Policy Act of 1992

The Energy Policy Act of 1992 was enacted to reduce U.S. dependence on foreign petroleum and improve air quality. This law includes several provisions intended to build an inventory of alternative-fuel vehicles in large, centrally fueled fleets in metropolitan areas. The Energy Policy Act of 1992 requires certain federal, state, and local government and private fleets to purchase a percentage of light-duty alternative fuel vehicles capable of running on alternative fuels each year. Financial incentives are also included. Federal tax deductions are allowed for businesses and individuals to cover the incremental cost of alternative fuel vehicles. The Energy Policy Act of 1992 also requires states to consider a variety of incentive programs to help promote alternative-fuel vehicles.

Energy Policy Act of 2005

The Energy Policy Act of 2005 includes provisions for renewed and expanded tax credits for electricity generated by qualified energy sources, such as landfill gas; provides bond financing, tax incentives, grants, and loan guarantees for clean renewable energy and rural community electrification; and establishes a federal purchase requirement for renewable energy.

Executive Order 13423 (Strengthening Federal Environmental, Energy, and Transportation Management), signed in 2007, strengthens the key energy management goals for the federal government and sets more challenging goals than the Energy Policy Act of 2005. The energy reduction and environmental performance requirements of Executive Order 13423 were expanded upon in Executive Order 13514 (Federal Leadership in Environmental, Energy, and Economic Performance), which was signed in 2009.

Corporate Average Fuel Economy Standards

Established by the U.S. Congress in 1975, the Corporate Average Fuel Economy (CAFÉ) standards reduce energy consumption by increasing the fuel economy of cars and light trucks. The National Highway Traffic Safety Administration (NHTSA) and U.S. Environmental Protection Agency (USEPA) jointly administer the CAFÉ standards. Congress has specified that CAFÉ standards must be set at the "maximum feasible level" with consideration given to (1) technological feasibility; (2) economic practicality; (3) effect of other standards on fuel economy; and (4) the need for the nation to conserve energy.[233]

[233] For more information on the CAFÉ standards, refer to https://www.nhtsa.gov/laws-regulations/corporate-average-fuel-economy.

The key federal vehicle efficiency regulations related to national fuel economy and GHG emissions are as follows:

- In 2016, NHTSA and EPA finalized national fuel economy and GHG emission standards for medium- and heavy-duty vehicles that would cover model years 2018 to 2027 for certain trailers and model years 2021 to 2027 for semi-trucks, large pickup trucks, vans, and all types and sizes of buses and work trucks.
- In 2020, NHTSA and EPA finalized updated CAFÉ and GHG emissions standards for passenger cars and light trucks and established new standards, covering model years 2021 through 2026.
- In 2021, EPA revised the GHG emissions standards for passenger cars and light trucks for model years 2023 through 2026 to leverage advances in clean car technology.
- In 2022, NHSTA revised the CAFÉ standards for passenger cars and light trucks for model years 2024 to 2026, which are expected to result in average fuel economy label values of 49 miles per gallon.

Fuel-efficiency standards for medium- and heavy-duty trucks have been jointly developed by USEPA and NHTSA. USEPA and NHTSA have also adopted heavy-duty truck standards, which cover model years 2021–2027 and require the phase-in of a 5 to 25 percent reduction in fuel consumption over the 2017 baseline, depending on the compliance year and vehicle type (USEPA 2016).

However, it is legally infeasible for individual municipalities to adopt more stringent fuel efficiency standards (see California Vehicle Efficiency Regulations, below). The Federal Clean Air Act (42 United States Code [USC] Section 7543[a]) states that "no state or any political subdivision thereof shall adopt or attempt to enforce any standard relating to the control of emissions from new motor vehicles or new motor vehicle engines subject to this part."

Clean Trucks Plan

On August 5, 2021, EPA announced plans to reduce GHG emissions and other harmful air pollutants from heavy-duty trucks through a series of three rulemakings that would collectively be called the Clean Trucks Plan. The first rulemaking, Control of Air Pollution from New Motor Vehicles: Heavy-Duty Engine and Vehicle Standards, was signed by EPA on December 20, 2022 (EPA–HQ–OAR–2019–0055), and sets stronger emissions standards for heavy-duty vehicles and engines starting in model year 2027.

Under the Clean Trucks Plan, EPA has proposed two additional rulemakings in 2023. One of the proposed rulemakings, Greenhouse Gas Emissions Standards for Heavy-Duty Vehicles, would revise its regulations to reduce GHG emissions for model year 2027 and later heavy-duty vehicles by improving fuel efficiency standards. This rulemaking would build on the success of

previous rulemakings to reduce GHG emissions from model year 2014 and newer heavy-duty vehicles. The second proposed rulemaking would address multi-pollutant emissions, including GHG emissions and emissions that form smog and soot, for model year 2027 and later commercial pickup trucks and vans.

Construction Equipment Regulations

Construction equipment fuel efficiency requirements are generally referenced as "Tier 4" as regulated under 40 Code of Federal Regulations Parts 1039, 1065, and 1068, with similar provisions under the California Air Resources Board regulations such as California Code of Regulations (CCR), Title 13, Sections 1956.8, 2025. The CARB also regulates construction equipment emissions ensuring that they include "every feasible control measure" (Health & Safety Code, Sections 39602.5, 39667, 43013). "Every feasible measure" under the Clean Air Act (Health & Safety Code Section 40612(c)(1)(A)) has been interpreted by CARB to be consistent with the definition of feasibility under CEQA Guidelines Section 15364. Under California law, "Tier 4" is generally used interchangeably with "2010 model year engines or equivalent" (13 CCR Section 2025(d) (3)(F)). To provide for a worst-case analysis, quantitative modeling conservatively assumed the default rate in CalEEMod.

b. State Laws, Plans, Programs, and Regulations

California Public Utilities Commission Plans and Programs

The California Public Utilities Commission (CPUC) regulates privately owned utilities providing telecommunications, electric, natural gas, water, railroad, rail transit, passenger transportation services, and in-state moving companies. The CPUC is responsible for assuring that California utility customers have safe, reliable utility services at reasonable rates, while protecting utility customers from fraud. The CPUC regulates the physical construction of electric generation, transmission, and distribution facilities, and the local distribution pipelines for natural gas.[234]

Renewable Portfolio Standard

The Renewable Portfolio Standard Program, as updated in 2018 (SB 100), requires the state to procure 60 percent of its electricity from renewable sources by 2030 and that CARB should plan for 100 percent eligible renewable energy resources and carbon-free sources by 2045. SB 1020, signed on September 16, 2022, revises SB 100, and instead requires that renewable energy resources and zero-carbon resources supply 90 percent of all retail electricity sales to end-use customers by December 31, 2035, 95 percent by December 31, 2040, and 100 percent by December 31, 2045; and supply 100 percent of electricity procured to serve all state agencies by

[234] California Public Utilities Commission, California Public Utilities Commission website, accessed June 2024, http://www.cpuc.ca.gov/.

December 31, 2035 (Public Utilities Code Sections 399.11, 399.30, and 454.33). Peninsula Clean Energy (PCE) is the primary electricity provider for residences and businesses in Brisbane. PCE is a Community Choice Aggregator (CCA) that supplies electricity principally from wind, solar, and hydro resources, and offers up to 100 percent renewable electricity to residential and commercial customers.

Long-Term Energy Efficiency Strategic Plan

The CPUC adopted the 2011 updated Long-Term Energy Efficiency Strategic Plan, which is a road map to achieving maximum energy savings in California through 2020. The Energy Efficiency Strategic Plan indicates that energy efficiency is the highest priority resource in meeting California's energy needs.

The CPUC also adopted zero net energy (ZNE) goals. In order to achieve ZNE standards, new buildings must use a combination of improved efficiency and distributed renewable energy generation to meet 100 percent of their annual energy need. The 2019 Title 24 standards were adopted on May 9, 2018, and went into effect on January 1, 2020. The 2019 Title 24 standard required photovoltaic (PV) installations on new homes for the first time. The following goals are set forth in the Long-Term Energy Efficiency Strategic Plan:

- All new residential construction will be zero net energy by 2020.
- All new commercial construction will be zero net energy by 2030.
- 50 percent of commercial buildings will be retrofit to zero net energy by 2030.
- 50 percent of new major renovations of state buildings will be zero net energy by 2025.

However, outstanding issues remain, including how ZNE should be defined, the need to identify compliance pathways when on-site renewable generation is not feasible, and the appropriate role for natural gas in ZNE buildings. The primary challenge is to build a technical and regulatory foundation for orchestration of energy efficiency and all other feasible distributed and customer-sited clean energy resources.

California Energy Action Plan

California's *2008 Energy Action Plan Update* updates the *2005 Energy Action Plan II*, which is the state's principal energy planning and policy document. The plan maintains the goals of the original *Energy Action Plan*, describes a coordinated implementation plan for state energy policies, and identifies specific action areas to ensure that California's energy is adequate, affordable, technologically advanced, and environmentally sound. First-priority actions to address California's increasing energy demands are to promote energy efficiency, demand response (i.e., reducing customer energy usage during peak periods to address power system reliability and support the best use of energy infrastructure), and use of renewable power

sources. To the extent that these strategies are unable to satisfy increasing energy and capacity needs, the plan supports clean and efficient fossil-fuel fired generation.

California Energy Commission

The California Energy commission (CEC) is the primary energy policy and planning agency in California. Created by the California Legislature in 1974, the CEC has five major responsibilities: (1) forecast future energy needs and keep historical energy data; (2) license thermal power plants 50 MW or larger; (3) promote energy efficiency through appliance and building standards; (4) develop energy technologies and support renewable energy; and (5) plan for and direct the state response to energy emergencies.

In 2017, as called for in Senate Bill 350, the CEC established ambitious annual targets to achieve a state-wide doubling of cumulative energy efficiency savings in electricity and natural gas end uses by 2030. The CEC developed the doubling targets in collaboration with the CPUC, investor-owned utilities (IOUs), publicly owned utilities (POUs), and other stakeholders through a public process. Achieving these efficiency targets is one of the primary ways the energy sector can help achieve the state's climate goal of reducing GHG emissions to 40 percent below 1990 levels by 2030. However, the state will need additional efforts to decarbonize homes and businesses to meet California's goals for 2030 and 2050.

Electrification of space and water heating is one of the state's key strategies to reduce or eliminate GHG emissions from buildings, including the methane emissions associated with natural gas use. GHG reductions will accelerate as the electricity system becomes cleaner with large increases in renewable resources.

Senate Bill 1389

Senate Bill (SB) 1389 (Public Resources Code [PRC] Sections 25300–25323) requires the CEC to prepare a biennial integrated energy policy report that assesses major energy trends and issues facing the electricity, natural gas, and transportation fuel sectors in California, and to provide policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance the state economy; and protect public health and safety (PRC Section 25301(a)).

The 2022 Integrated Energy Policy Report Update (CEC 2023a) provides the results of CEC assessments on a variety of energy issues facing California, including:

- Embedding Equity and Environmental Justice at the CEC
- California Energy Demand Forecast
- Energy Reliability
- Western Electricity Integration

- Gasoline Cost Factors and Price Spikes
- Role of Hydrogen in California's Clean Energy Future
- Fossil Gas Transition
- Distributed Energy Resources

California Air Resources Board

Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling

In 2004, the California Air Resources Board (CARB) adopted the Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling to reduce public exposure to diesel particulate matter emissions (13 CCR Section 2485). The measure applies to diesel-fueled commercial vehicles with gross vehicle weight ratings greater than 10,000 pounds that are licensed to operate on highways, regardless of where they are registered. This measure prohibits diesel-fueled commercial vehicles from idling for more than 5 minutes at any given location. While the goal of this measure is primarily to reduce public health impacts from diesel emissions, compliance with the regulation also results in energy savings in the form of reduced fuel consumption from unnecessary idling.

Low Carbon Fuel Standard

The Low Carbon Fuel Standard administered by CARB required producers of petroleum-based fuels to reduce the carbon intensity of their products to 10 percent total reduction by 2020. Petroleum importers, refiners, and wholesalers can either develop their own low-carbon fuel products or buy Low Carbon Fuel Standard credits from other companies that develop and sell low-carbon alternative fuels, such as biofuels, electricity, natural gas, and hydrogen.

Truck and Bus Regulation

In addition to limiting exhaust from idling trucks, CARB approved the Truck and Bus Regulation in 2008 to reduce the emissions of oxides of nitrogen and particulate matter from existing diesel vehicles operating in California (13 CCR Section 2025). The phased regulation aimed to reduce emissions by requiring the installation of diesel soot filters and encouraging the retirement, replacement, or retrofit of older engines with newer emission-controlled models. This regulation was fully implemented in 2023.

CARB has also promulgated emissions standards for off-road diesel construction equipment of greater than 25 horsepower such as bulldozers, loaders, backhoes, and forklifts, as well as many other self-propelled off-road diesel vehicles. The In-Use Off-Road Diesel-Fueled Fleets regulation adopted by CARB on July 26, 2007, aims to reduce emissions by installing diesel soot filters and encouraging the retirement, replacement, or repowering of older, dirtier engines with newer

emissions-controlled models (13 CCR Section 2449). The compliance schedule required the full implementation by 2023 of all equipment for large and medium fleets and requires full implementation for small fleets by 2028.

While the goals of these measures are primarily to reduce public health impacts from diesel emissions, compliance with the regulation has shown an increase in energy savings in the form of reduced fuel consumption from more fuel-efficient engines (Cummins Inc. 2024).

CARB also approved the Off-Road Diesel Regulation (13 CCR Section 2449), which imposes limits on idling; requires fleets to reduce their emissions by retiring, replacing, or repowering older engines, or installing Verified Diesel Emission Control Strategies (i.e., exhaust retrofits). The requirements and compliance dates of the Off-Road Diesel Regulation vary by fleet size, and large fleets (fleets with more than 5,000 horsepower) were required to meet average targets or comply with Best Available Control Technology (BACT) requirements beginning in 2014. In 2022, CARB approved amendments that required the use of renewable diesel fuel starting January 1, 2024. Fleets comprising Tier 4 Final equipment or zero-emission equipment are exempt from this requirement.

California Air Resources Board Advanced Clean Trucks Program

On June 25, 2020, CARB adopted the Advanced Clean Trucks rule, which requires truck manufacturers to transition from diesel vehicles to electric zero-emissions vehicles beginning in 2024, with the goal of reaching 100 percent zero-emissions vehicles by 2045. The goal of the legislation is to help California meet its climate targets of a 40 percent reduction in GHG emissions and a 50 percent reduction in petroleum use by 2030, and an 80 percent reduction in GHG emissions by 2050.

Truck manufacturers will be required to sell zero-emissions vehicles as an increasing percentage of their annual sales from 2024 through 2035. Companies with large distribution fleets (50 or more trucks) will be required to report information about their existing fleet operations in an effort to identify future strategies for increasing zero-emissions fleets state-wide (CARB 2020).

Zero-emissions vehicles are two to five times more energy efficient than diesel vehicles, and the Advanced Clean Trucks rule will reduce GHG emissions with the co-benefit of reducing dependence on petroleum fuels and reducing energy consumption.

California Air Resources Board Advanced Clean Fleets Program

On April 28, 2023, CARB adopted the Advanced Clean Fleets rule (13 CCR Sections 2013 et seq.), which generally requires the shift to 100% zero-emissions trucking by 2035. This regulation is part of CARB's broader strategy to accelerate the transition to zero-emissions medium- and heavy-duty vehicles. It complements the Advanced Clean Trucks regulation, focusing on reducing emissions and promoting zero-emissions vehicle adoption. The Advanced

Clean Fleets regulation covers various fleet types, including drayage operations, government-owned fleets, and high-priority fleets, mandating Zero Emission Vehicle (ZEV) adoption in phases. Key provisions include manufacturer sales mandates, requirements for drayage fleets to transition to ZEVs, and specific ZEV targets for high-priority and government fleets. The regulation is expected to significantly reduce emissions, benefit public health, and contribute to achieving climate goals (CARB 2023).

To support the transition, CARB provides incentives, grants, and funding programs, with an emphasis on equity for disproportionately impacted communities. These programs aim to reduce the financial burden on fleet owners, promote early adoption, and expand charging and hydrogen fueling infrastructure. CARB estimates that the Advanced Clean Fleets regulation, in conjunction with the ACT regulation, will result in a substantial increase in ZEVs on California roads, contributing to emissions reduction and public health improvement. The regulation reflects California's commitment to achieving a fully zero-emissions fleet by 2045, with specific targets for various vehicle categories.

In January 2025, California withdrew requests for Clean Air Act waivers from the EPA needed to support four recently adopted vehicle emissions regulations, including the Advanced Clean Fleets Regulations. CARB withdrew the waiver requests due to the uncertainty caused by the impending change in federal administration. Until CARB repeals the regulations, or they are invalidated by a court, some legal requirements still apply. While certain aspects of ACF are likely unenforceable absent a Clean Air Act waiver, other portions may not be subject to the Clean Air Act and the waiver requirement, such as the part of the Advanced Clean Fleet regulation that applies to state and local government fleets.

Advanced Clean Cars II Program

In January 2012, pursuant to Recommended Measures T-1 and T-4 of the Scoping Plan, CARB approved the Advanced Clean Cars Program, a new emissions-control program for model years 2017 through 2025. In response to a midterm review of the standards in March 2017, CARB directed staff to begin working on post-2025-model-year vehicle regulations (Advanced Clean Cars II) to research additional measures to reduce air pollution from light-duty and medium-duty vehicles. Additionally, as described previously, in September 2020, Governor Newsom signed Executive Order (EO) N-79-20, which established a goal for 100 percent of new passenger cars and trucks sold in California by 2035 to be zero-emissions and directed CARB to develop and propose regulations toward this goal. The primary mechanism for achieving these targets for passenger cars and light trucks is the Advanced Clean Cars II Program. CARB adopted the Advanced Clean Cars II regulations on August 25, 2022.

Title 24, California Code of Regulations

Title 24 of the California Code of Regulations (24 CCR) requires, among other things, that California homes and businesses meet strong energy efficiency measures, thereby lowering their energy use. Title 24 contains numerous subparts, including Part 1 (Administrative Code), Part 2 (Building Code), Part 2.5 (Residential Code), Part 3 (Electrical Code), Part 4 (Mechanical Code), Part 5 (Plumbing Code), Part 6 (Energy Code), Part 8 (Historical Building Code), Part 9 (Fire Code), Part 10 (Existing Building Code), Part 11 (Green Building Standards Code), and Part 12 (Referenced Standards Code).

Starting in 1978, the California Building Standards Commission and the California Energy Commission adopted the California Energy Code (24 CCR Part 6). These energy efficiency standards are reviewed every few years by the Building Standards Commission and the California Energy Commission and revised if necessary (PRC Section 25402(b)(1)). The regulations are adopted with the goal of "[r]educing of wasteful, uneconomic, inefficient, or unnecessary consumption of energy" (PRC Section 25402; *Building Code Action v. Energy Resources Conservation & Dev. Com.* (1979) 88 Cal.App.3d 913). These regulations are carefully scrutinized and analyzed for technological and economic feasibility, and cost effectiveness (PRC Section 25402(b), and (d)).

Part 6 (Building Energy Efficiency Standards)

Part 6 of Title 24 contains the 2022 Building Energy Efficiency Standards for new residential and non-residential buildings, which went into effect on January 1, 2023 (CEC 2022a). The 2022 Standards focus on efficient electric heat pumps, establishes electric-ready requirements for new homes, expands solar photovoltaic and battery storage standards, and strengthens ventilation standards.

Under the 2022 Standards, state-wide CO_2 emissions will be reduced by about 330,000 metric tons per year, or about 0.4 percent, per year, compared to the previous 2019 Standards (CEC 2021).

Part 11 (CALGreen)

In 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (Part 11 of Title 24) is commonly referred to as CALGreen and establishes minimum mandatory standards as well as voluntary standards pertaining to the planning and design of sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and interior air quality. The CALGreen standards took effect in January 2011 and instituted mandatory minimum environmental performance standards for all ground-up, new construction of commercial, low-rise residential, state-owned buildings, and schools and hospitals. The CALGreen 2022 standards became effective on January 1, 2023 (International

Code Council [ICC] 2023). The nonresidential mandatory standards require the following measures that relate to utilities and service systems (24 CCR Part 11):

- Mandatory reduction in indoor water usage through installation of separate submeters or metering devices, and compliance with specified flow rates for plumbing fixtures and fittings and faucets and fountains.
- Mandatory reduction in outdoor water usage through compliance with a local water efficient landscaping ordinance or the California Department of Water Resources' Model Water Efficient Landscape Ordinance and installation for recycled water supply systems where available/applicable.
- 65 percent of construction and demolition waste must be diverted from landfills and 100 percent of trees, stumps, rocks, and associated vegetation and soils resulting primarily from land clearing shall be reused or recycled.
- Provide readily accessible areas for recycling that serve the entire building.
- Mandatory inspections of energy systems to ensure optimal working efficiency.
- Inclusion of electric vehicle charging stations or designated spaces capable of supporting future charging stations.

Clean Energy and Pollution Reduction Act of 2015

The Clean Energy and Pollution Reduction Act of 2015 (SB 350) requires that the amount of electricity generated and sold to retail customers per year from eligible renewable energy resources be increased from 33 percent to 50 percent by December 31, 2030, thereby doubling energy efficiency within the state. SB 350 revises the California Renewable Portfolio Standard program and certain other requirements for public utilities and publicly owned electric utilities. SB 350 also requires local publicly owned electric utilities to establish annual targets for energy efficiency savings and demand reduction consistent with a state-wide goal established by the CPUC and provides incentives for electrification of rail facilities. Local utilities would be required to develop more detailed strategies and incentives for use of renewable energy sources, resulting in an increased demand for renewable energy generation.

SB 350 emphasizes the important role of electric vehicles in California's overall scheme to combat climate change, declaring that "[d]eploying electric vehicles should assist in grid management, integrating generation from eligible renewable energy resources, and reducing fuel costs for vehicle drivers …" The bill promotes the development of additional electric vehicle charging infrastructure to encourage greater use of electric cars and requires electrical utilities to include expansion of electrical vehicle charging facilities as part of their strategies and incentives for reducing overall energy consumption.

c. Regional Plans, Programs, and Regulations

Descriptions of energy-related regional plans, programs, and regulations, including Plan Bay Area 2050 and Transit-Oriented Communities Policy (MTC Resolution No. 4530) are provided in Section 4.3, Land Use and Planning Policies.

d. City of Brisbane Plans, Ordinances, and Regulations

General Plan

Chapter IX: Conservation

Policy 139: Promote the conservation of non-renewable energy resources.

Policy 140: Encourage energy-efficient building design and site planning.

Program 140a: Continue to administer building codes that contain State requirements for energy conservation.

Program 140b: As a part of the review of land use applications for subdivisions, specific plans and new non-residential and multi-family projects, encourage the design and siting of structures and the use of landscape materials in terms of utilizing natural resources for heating and cooling.

Policy 141: Encourage the installation of energy-efficient appliances.

Policy 142: Continue to support vehicle trip-reduction programs to conserve non-renewable fuels. (See Chapters VI and X of the City's General Plan for additional trip reduction policies.)

Chapter XII: Policies and Programs by Subarea

Policy BL.1 G: The required specific plan for the Baylands shall include a sustainability program for new development consistent with the principles of the Sustainability Framework for the Brisbane Baylands, Final Report accepted by the City Council on November 5, 2015. Baylands development shall be designed so as to be energy neutral on an ongoing basis.

Brisbane Municipal Code

Brisbane Municipal Code Section 15.80 specifies green building standards for new developments, including meeting a minimum Leadership in Energy and Environmental Design (LEED) "Silver" rating on the Green Building Project Checklist for all new commercial projects over 10,000 square feet and achieving a "green home" rating on the Multi-Family GreenPoint

Checklist[235] for any residential developments with 20 or more units. To meet these requirements, a variety of energy, stormwater, and water efficiency measures can be implemented that are integrated in green building design, siting, construction, and operations.

Building Code[236]

The latest update to the California Building Code (CBC) was adopted by the City of Brisbane and is effective as of January 1, 2023. Subsequently, on July 18, 2024, the Brisbane City Council adopted further Municipal Code amendments in the form of an Energy Performance Reach Code (Ordinance No. 691). At the same time, the Council adopted further amendments to the City's EV charging requirements (see discussion below under "Chapter 15.84, Electric Vehicle Infrastructure").

The CBC requires that new construction be more energy efficient and includes solar requirements for new residential construction. In addition, through Ordinance 675,[237] the City of Brisbane has chosen to exceed the state's standards including installation of electric vehicle charging infrastructure, discussed below.[238]

Ordinance No. 691, the City's Energy Performance Reach Code, both amended EV charging infrastructure requirements, discussed below, and added Energy Performance requirements for new buildings; the latter replaced all-electric requirements previously adopted under Ordinance No. 675. The 2022 CBC requires new construction be more energy efficient and includes solar energy and battery storage system requirements for new residential and nonresidential construction. Through the Reach Code, the City of Brisbane has chosen to exceed the state's standards by requiring new residential and non-residential development to meet increased energy performance standards, resulting in an anticipated decrease in energy use and emissions from newly constructed buildings, compared to the 2022 CBC. The City's Reach Code applies to all new construction and is intended to achieve cost-effective energy efficiency and reduce emission through performance standards, rather than a set of detailed prescriptive requirements. For example, the Reach Code does not prohibit the use of natural gas or propane appliances, but requires that such use be within an overall building energy use scheme that

[235] Build It Green, a non-profit organization, has developed New Home Construction Green Building Guidelines and a Multi-Family GreenPoint Checklist, based upon the Multi-Family Green Building Guidelines established by the Alameda County Waste Management Authority. See Section 15.80.020 of the Brisbane Municipal Code for more information.

[236] The California Building Standards Code, often referred to as the state's "Building Code," comprises all parts of Title 24 of the California Code of Regulations (24 CCR), as set forth above on page 4.11-13.

[237] Brisbane Ordinance No. 675 can be found at: https://library.municode.com/ca/brisbane/ordinances/municipal_code?nodeId=1185187. Ordinance No. 675 amended CALGreen, as it applies in Brisbane (Municipal Code Section 15.04.043), such that new construction and qualifying alterations "do not use combustion equipment or are ready to accommodate installation of electric heating appliances," with certain exceptions.

[238] Ordinance No. 675 also generally precluded use of natural gas in new construction; however, those provisions were repealed in July 2024 as part of adoption of the Energy Performance Reach Code through Ordinance No. 691.

meets the City's performance standards. Additionally, the Reach Code requires construction that employs natural gas or propane to also include electrical circuitry to allow for potential future conversion to electric appliances.

The Reach Code sets forth compliance metrics for new single-family residential construction and for new multi-family residential and non-residential construction, each of which is based on definitions in the California Energy Code (24 CCR Part 6). For single-family homes, the Reach Code requires achievement of a performance standard (Energy Budget) based on the building's Energy Design Rating. The Energy Design Rating factors in both overall energy efficiency and "time-dependent valuation" (TDV) Energy. TDV Energy considers the varying costs and impacts of energy use at different times of the day and year, including, among other things, greenhouse gas emission rates and actual cost of electricity from "peaker" power plants, which are typically less efficient facilities that operate only during periods of highest energy demand (e.g., on the hottest days of the year, when air conditioning use is highest). TDV Energy is intended to reflect the fact that energy use during periods of peak demand have greater environmental and economic costs than off-peak energy use. Both Source Energy and TDV Energy for a particular building are determined based on calculation methodologies set forth by the California Energy Commission in manuals and appendices to the state Energy Code.

Similarly, for new multifamily residential buildings, the Reach Code requires achievement of TDV Energy Budget as set forth in the Code. Different standards apply to low-rise (four stories or fewer) and high-rise (more than four stories) buildings. Exceptions are available for both single- and multi-family buildings in cases of documented infeasibility and other limited circumstances.

In addition, the Brisbane City Council adopted an updated Transportation Demand Management (TDM) ordinance amending Brisbane Municipal Code Section 10.52 on October 19, 2023. The TDM ordinance's purpose is to "promote more efficient utilization of existing transportation facilities."

Chapter 15.84, Electric Vehicle Infrastructure

Chapter 15.84 of the City's Municipal Code, Electric Vehicle Infrastructure, sets forth requirements for the installation of electric vehicle (EV) charging equipment in new construction.

- For new single-family residences, duplexes, and townhouses (and new garages at existing such buildings) where two or more parking spaces per unit are required, the Code requires installation of one Level 1 EV Ready Circuit and one Level 2 EV Ready Circuit.[239]

[239] Level 1 chargers operate using a standard 120-volt, 20-amp household electrical circuit. Level 2 chargers use higher-output 240-volt power sources (generally with a 40-amp capacity) so that recharge times for EVs are much faster than with Level 1 systems.

- For new multifamily residential buildings, the Code requires a minimum of one EV charging ready parking space per unit, with a minimum of 10 percent of these spaces equipped with Level 2 EV chargers. Additionally, at least 50 percent of guest parking spaces must have EV chargers. Finally, a minimum of 40 percent of the total number of parking spaces must be EV charging-ready or have chargers installed.[240]
- For non-residential new construction:
    - Where nine or fewer parking spaces are required, at least one space must be either EV-ready (equipped with a Level 2 EV Ready Circuit) or have an EV charger installed.
    - Where 10 or more parking spaces are required, at least 15 percent of the required spaces must have Level 2 EV chargers, with additional 10 percent or 35 percent being required to provide low-power (20-amp) EV charging-ready spaces, depending on whether the non-residential use is defined in the Municipal Code as having higher or lower parking turnover.[241]

4.11.4 RELEVANT SPECIFIC PLAN PROVISIONS

The Specific Plan includes the following energy-related features that would either reduce energy consumption or reduce the Specific Plan's demand for energy from the regional electricity grid and other regional energy supply infrastructure:

- Higher-intensity development within walking distance of the Caltrain Bayshore station, along with construction of an entry plaza to the station.
- Solar-powered infrastructure systems totaling 59.8 MW of capacity and 92,445 MWh of annual generation[242] would be installed within the Specific Plan area, including a 55-acre solar field[243] (40 MW) in addition to 30 MW of distributed solar installed on buildings, ground-mounted, and over parking lots where feasible.
- 30 MW of battery-based stationary energy storage systems, equivalent to 44,056 MWh of annual electricity storage,[244] would be installed as part of site-specific development projects within the Specific Plan area. In addition, a 250 MW front-of-the-meter, utility-

[240] Certain exceptions are permitted, including, in the case of multi-family residential buildings, a reduction in the number of EV-ready spaces to fewer than one per unit if fewer than one parking space per unit are required.

[241] Higher parking turnover uses are those such as retail, restaurants, professional offices, gyms, recreational uses, and meeting halls. Lower parking turnover uses are those such as office, R&D, industrial, hotels, and schools.

[242] The Specific Plan requires a minimum of 85,000 MWh of electricity to be generated annually. Based on the reasonably foreseeable mix of building types anticipated within the Baylands, actual renewable energy generation was estimated to be 92,445 MWh in the Baylands Energy Plan prepared by Thornton Tomasetti Inc. in May 2021.

[243] The 55-acre solar farm would be constructed in the eastern portion of the Baylands, between Visitacion Creek and the relocated Lagoon Road, in increments as portions of the landfill closure process are completed.

[244] The annual energy storage figure is based on 30 MW of total battery capacity operating 4 hours per day for 365 days per year, based on the Baylands Energy Plan prepared by Thornton Tomasetti Inc. in June 2023.

scale battery storage facility, equivalent to 365,000 MWh of annual electricity storage,[245] is proposed that would serve as a regional grid resource.

- On-site bicycle and pedestrian trails that connect to off-site trails.
- An on-site shuttle system connecting Baylands residential and office uses to the Caltrain Bayshore Station.

a. LEED Rating Requirements

The Specific Plan requires that all new buildings constructed as part of the Specific Plan be LEED Gold or GreenPoint Rated (based on 2022 rating criteria for LEED and GreenPoint). The Specific Plan incorporates the current (as of 2022) LEED for Neighborhood Development (ND) strategies, as well as the current LEED v4 Gold minimum rating for new commercial buildings, and the current Greenpoint Rated Checklist for single-family and multi-family new homes in California. The Specific Plan also requires residential and nonresidential buildings to comply with CALGreen Tier 1 voluntary standards. In the event of a conflict between the private and GreenPoint rating systems and applicable laws, regulations, or ordinances (inclusive of CALGreen Tier 1), the Specific Plan states the more stringent requirement shall apply.[246]

b. Building Electrification

The Specific Plan applicant has committed to construct all buildings to be all-electric (i.e., no use of natural gas) and proposes not extending natural gas service to new development outside of Existing Use Areas within the Baylands.[247] Additionally, the Specific Plan proposes to deliver all energy from renewable resources to the Baylands.

c. Building Energy Efficiency Strategies

The Baylands Energy Plan prepared for the applicant identifies specific building efficiency project design features that development teams should incorporate to meet the Specific Plan's energy efficiency targets (Thornton Tomasetti Inc. 2023).[248] This document was included in the energy modeling conducted for the project.

[245] The annual energy storage figure is based on 250 MW of total battery capacity operating 4 hours per day for 365 days per year, based on the Baylands Energy Plan prepared by Thornton Tomasetti Inc. in June 2023.

[246] The Specific Plan does not define "conflict," nor does it require compliance with the most stringent applicable standard. Thus, the EIR assumes that Specific Plan development would comply with CALGreen Tier 1 voluntary standards, unless an adopted legal requirement would mandate more stringent requirements.

[247] Research and development uses would use on-site propane tanks on an as-needed basis.

[248] Because the Specific Plan does not explicitly require implementation of these measures, the EIR assumes that Specific Plan development would comply with CALGreen Tier 1 voluntary standards, unless an adopted legal requirement would mandate more stringent requirements.

Title 24, Part 6 code requirements include efficient envelopes, lighting, mechanical systems, and simple and inexpensive energy-saving methods such as air-side economizers. Automated daylight controls are also required for most perimeter non-residential/hotel space types by Title 24, Part 6. Building strategies that will be explored in the design process for all on-site buildings to benefit the Baylands and improve upon the code standards include:

- **Passive Building Strategies:** To reduce lighting energy, orienting buildings on an east-west axis where possible will minimize solar heat gain and maximize daylight. Incorporating natural ventilation into all building types except high-density office and lab sections and using shading devices to reduce unwanted solar heat gain.
- **Energy Star Products and Equipment:** Using Energy Star rated appliances, lighting, data center equipment, electronics, office equipment, building envelope products, heating and cooling systems, water heaters, and commercial food service equipment.
- **Efficient Building Envelopes:** Incorporating improvements to Title 24 code requirements for insulation R-values and infiltration. Minimizing thermal bridging across the facade with thermal breaks at connecting areas like overhangs and balconies. Using high-performance window wall systems with shading to block excessive solar heat gain and glazing with low u-values, low solar-heat gain coefficient (SHGC), and high visible light transmittance (VLT), apart from Lab buildings – due to the high volume of air movement, additional heating must be needed in which a higher SHGC is beneficial.
- **Air Sealing:** Designing a "tight" envelope using an exterior liquid applied air barrier, envelope taping and sealing all connection points and transitions, installing air locks at entrances, windows with low air-leakage ratings, and latching mechanisms, for all buildings will significantly reduce air leakage. Incorporating vestibules at main entrances in all multi-family and commercial buildings to reduce air infiltration.
- **High-Efficiency Fans, Pumps, & Motors with Variable Speed Drives:** Installing only fans, pumps, and motors with variable speed drives (increase/decrease speed) to reduce energy use.
- **Heat Pumps:** Using heat pump systems that move heat or cool air by using a compressor and a circulating liquid of refrigerant from one area to another for space heating and hot water systems. Heat pumps use less energy to make heat and can achieve more than 300 percent efficiency, versus traditional gas furnaces, which achieve around 98 percent efficiency. Air-to-water heat pumps will extract low temperature heat from outside air and deliver heat into a stream of water passing through a condenser. This system pairs well with the use of hydronic heating systems such as radiant floors and radiant ceiling panels, fan-coil convectors, and chilled beams. The heat pump system will also be configured to provide energy needed for most domestic water heating.

- **HVAC Controls:** Optimize energy saving by adjusting setpoints (e.g., lowering daytime temperature for heating, increasing for cooling, and lowering nighttime heating), reducing minimum air flow rates through variable-air volume boxes, and limiting heating and cooling to when the building is most likely occupied.
- **Heat Recovery Ventilators:** The appropriateness of using heat recovery ventilators will be evaluated on a building-by-building basis. Buildings with a Variable Refrigerant Flow (VRF) type heat pump system will also utilize a Dedicated Outdoor Air system (DOAS) with heat recovery to optimize energy savings.
- **Lighting Technology:** The 2022 California Green Building Code, Title 24, Part 6 requires using lighting controls to reduce energy use in building lighting systems. These requirements can be done by sizing and orientating windows for optimal daylight and providing shade as needed to prevent glare. Reducing lighting power densities (LPDs) can be achieved through selection of LED fixtures and the careful layout of lighting.
- **Water Efficiency:** The building developments will use WaterSense labeled plumbing products per code, which will also reduce water use below code, targeting a combined 40 percent or greater reduction from code in fixture flush and flow rates. This will reduce consumption and water heating, especially for residential buildings where hot water consumption is the greatest.
- **Equipment Sizing:** Operating oversized equipment may be less efficient compared to properly sized equipment as it can decrease indoor thermal comfort due to unnecessary cycling and excessive airflow.
- **Duct Insulation:** Improving insulation of ducts that are not in enclosed, conditioned spaces above the code minimum will decrease efficiency losses.
- **Thermostats:** Using "smart thermostats" that minimize the use of supplementary electric resistance heating during startup and recovery from setback and optimize thermal comfort and energy savings by learning behavioral patterns of the occupants.
- **Zonal Control:** Zoning heating and air-conditioning systems into smaller zones to enable energy savings by maintaining a certain temperature setpoint only in a smaller square footage that is occupied. Fine grained controls can allow for adaptation in different occupied spaces in office buildings.
- **Lab-Specific Measures:** Providing supply and exhaust air to fume hoods with VAV (Variable Air Volume) capabilities to reduce energy.
- **Building Energy Metering:** Requiring meters for all loads in all buildings to monitor energy use. Implementing an ongoing operations and maintenance program to monitor building energy performance in line with best practices in retro-commissioning.

d. Electric Vehicle Charging

The Specific Plan requires provision of EV charging facilities in compliance with 2022 CALGreen Code Tier 1 voluntary requirements. Tier 1 requires one- and two-dwelling unit residential buildings to be Level 2 EV Ready. For multifamily, hotel, and motel buildings, the Brisbane Municipal Code Chapter 15.84 requires 40 percent of parking spaces to be EV Ready and 10 percent of parking spaces to be Level 2 EV Ready (a total of 50 percent of the parking spaces would include EV charging infrastructure). For non-residential buildings, Table 5.106.5.6.1 of the CALGreen Code is to be used to determine the number of EV-capable spaces required.

e. Transportation Demand Management Plan

As discussed in Chapter 3, *Project Description*, the Specific Plan proposes preparation of Transportation Demand Management (TDM) Plans for each applicable site-specific development project as it undergoes site-specific development review. The purpose of these TDM Plans is to encourage and incentivize travel other than via use of single-occupant vehicle trips in accordance with the City of Brisbane's TDM ordinance (Municipal Code Chapter 10.52), which would reduce vehicle trip generation by an additional 16.4 percent compared to the Specific Plan without the TDM measures (see analysis of Impact TRA-1). Mobile energy use associated with the Specific Plan was calculated based on total annual VMT assuming implementation of the TDM Plan.

4.11.5 SIGNIFICANCE CRITERIA

The following criteria were used to determine the significance of energy impacts.

Threshold EN-1: **The Baylands Specific Plan would cause a significant impact by consuming energy resources in a wasteful, inefficient, or unnecessary way.**

Threshold EN-2: **The Baylands Specific Plan would cause a significant impact if it would conflict with applicable programs, plans, ordinances, or policies for renewable energy and energy efficiency.**

4.11.6 PROJECT IMPACTS AND MITIGATION MEASURES

a. Impact EN-1: Consumption of Energy Resources in a Wasteful, Inefficient, or Unnecessary Way

Methodology for Determining Significance in Relation to Threshold EN-1

The significance of Impact EN-1 relies on quantifying, where possible, Baylands energy consumption during construction and operations and undertaking qualitative analysis where quantification is not possible to consider whether Baylands development would:

- Increase per capita energy consumption;
- Increase reliance on fossil fuels such as gasoline or diesel, natural gas, or coal; or
- Decrease reliance on renewable energy sources.

Project Construction

Construction activities could vary substantially from day to day, depending on the phase, specific types and number of construction activities being undertaken on any given day, and the number of workers and vendors who would travel to and from the Baylands for each such activity. This analysis considers these factors and provides the estimated maximum daily construction energy consumption for purposes of evaluating the associated impacts on energy resources.

Construction fuel use was forecasted by estimating CO_2 emissions from CalEEMod version 2022 for on-road and off-road equipment and converting CO_2 to gallons of gasoline and diesel fuel use using Climate Registry emission factors for the construction equipment expected to be used for each phase of project development (The Climate Registry 2023). Construction equipment and hours are consistent with the emissions modeling described in the *Air Quality Technical Report* and the *Greenhouse Gas Emissions Technical Report*.

Construction activities associated with the 2025 Specific Plan project are proposed to take place in two general phases, with Phase 1 (inclusive of the solar farm and infrastructure in the Phase 2 area) assumed to occur from 2027 through 2035, and Phase 2 assumed to occur from 2036 through 2040 (see Section 3.3.4 and **Table 3-8**). The development schedule would also be affected by market forces. The specific type of construction work would also vary by the buildout of the Baylands Specific Plan, but would generally consist of the following sequence:

1. Site preparation, including demolition of existing buildings and removal of existing vegetation and infrastructure in areas to be graded over the entirety of the Baylands;

2. Grading, which generally consists of moving approximately 2.5 million cubic yards of soil from the eastern portion of the Baylands to the western portion to achieve final grades and provide pads for building construction; and
3. Construction of infrastructure, buildings, and on-site amenities generally within the Phase 1 area west of the Caltrain right-of-way, followed by construction of these features within the eastern portion of the site.[249]

Phase 1 would be the more intensive of the two construction phases because the majority of site grading, which includes moving 2.5 million cubic yards of soil from the east side of the site (Phase 2 area) to the west side (Phase 1 area) would occur.

If the onset of construction were to be delayed to a later date than assumed in the analysis, construction impacts would be similar to or less than those analyzed. This is because a more energy-efficient construction equipment and vehicle fleet mix would be expected in the future, because the In-Use Off-Road Diesel-Fueled Fleets Regulation and Advanced Clean Trucks Program implemented by CARB require construction equipment fleet operators to phase in less-polluting, more fuel-efficient heavy-duty equipment and trucks over time (CARB 2016).

Electricity Consumption during Construction

A qualitative assessment of energy use during project construction was undertaken to determine whether Baylands construction would be expected to result in demand for fuel greater on a per-unit-of-development basis than other development projects in the region. In addition, the CalEEMod emissions model, described further in the *Greenhouse Gas Emissions Technical Report*, was used to estimate project emissions of criteria air pollutants and GHGs, as well as electricity, natural gas, and water use. The same model used for the air quality and GHG analyses in this Technical Report was also used for estimating energy use.

Transportation and Construction Equipment Fuels

Transportation fuels would be consumed for transportation of construction workers and materials to and from the Specific Plan and off-site construction areas, and operation of construction equipment within those areas throughout the two construction phases.

Fuel consumption by on-site heavy-duty construction equipment was calculated based on the equipment mix estimated by the Specific Plan applicant and usage factors provided in the CalEEMod construction output files included in Appendix C1 of the Brisbane Baylands Energy

[249] As discussed in Section 3.3.2, certain Baylands infrastructure features and project amenities located within the eastern portion of the site are proposed to be constructed concurrent with residential development within the western portion of the site. Such infrastructure features include the water recycling and water detention facilities, water storage tank, Lagoon Park, and Visitacion Creek.

Technical Report (EIR Appendix I). The total CO_2 was then divided by emission factors from The Climate Registry to estimate fuel use (The Climate Registry 2023).

Fuel consumption by construction on-road workers, vendors, and delivery/haul trucks was calculated using the trip rates and trip distances consistent with the air quality and GHG emissions modeling worksheets and CalEEMod construction output files. The total CO_2 was then divided by emission factors from The Climate Registry to estimate fuel use (The Climate Registry 2023).

A combination of CalEEMod defaults and project-specific information was used for construction vehicle trip lengths, worker commutes, vendor and concrete truck trips, and haul truck trips. Consistent with CalEEMod defaults, construction worker trips were assumed to include a mix of light-duty gasoline automobiles and light-duty gasoline trucks. Construction vendor trucks were assumed to be a mix of medium-heavy-duty and heavy-duty diesel trucks, and concrete and haul trucks were assumed to be heavy-duty diesel trucks. Fuel consumption under baseline conditions was then subtracted from construction fuel consumption to determine the net fuel consumption during construction of the Specific Plan, including off-site infrastructure improvements. Refer to Appendix F1 of the Brisbane Baylands Energy Technical Report (EIR Appendix I) for detailed energy calculations.

The energy usage required for construction of the Specific Plan and off-site infrastructure was estimated based on the number and types of equipment that would be used during both construction phases by assuming a conservative estimate of construction activities (i.e., maximum daily equipment usage levels). Energy for construction worker commuting trips was estimated based on the predicted number of workers for the various phases of construction and the estimated VMT based on the conservative values in the CalEEMod and EMFAC2021 models. The assessment also includes a discussion of the Specific Plan and off-site infrastructure compliance with relevant energy-related regulatory requirements and incorporation of design features discussed in the *Greenhouse Gas Emissions Technical Report* (EIR Appendix H.1), that would minimize the amount of energy usage during construction. These measures are also discussed in Chapter 3, *Project Description*, and the *Air Quality Technical Report* (EIR Appendix G.1).

The estimated fuel economy for heavy-duty construction equipment was based on fuel consumption factors from the CARB OFFROAD emissions model, a state-approved model for estimating emissions from off-road heavy-duty equipment. The estimated fuel economy for haul trucks, vendor trucks, concrete trucks, and worker commute vehicles was calculated using the trip rates and distances consistent with the air quality and GHG emissions modeling worksheets and CalEEMod construction output files. The total CO_2 was then divided by emission factors from The Climate Registry to estimate fuel use.

Specific Plan Operations

Existing uses within the Specific Plan area currently consume energy; some of these uses would be demolished and replaced with Specific Plan components, and some would remain. However, because the existing uses along Industrial Way that are planned to be demolished are anticipated to move elsewhere within San Francisco and San Mateo counties and continue to consume energy, such energy consumption would not be "retired" by the Specific Plan. Therefore, to provide a conservative analysis of the Specific Plan's impacts, energy usage for existing conditions was not subtracted from the Specific Plan's total estimated energy use. The assumptions used here are the same as those used in the *Greenhouse Gas Emissions Technical Report* (EIR Appendix H.1).

Operational Energy Demand Scenarios

Operational energy impacts are evaluated based on three modeling scenarios as described below:

- **Scenario 1:** Completion of the First Increment of the Proposed On-Site Solar Energy Generation Field. This represents operations of the Specific Plan at the completion of construction of the first increment of the on-site solar field in 2037, and includes 2,200 dwelling units of low-density residential, mid-rise residential, and high-rise residential, and 3,400,000 square feet of mid-density commercial with lab and retail, the water treatment plant, and the new fire station.
- **Scenario 2:** Phase 1 Operations. This represents operations of the Specific Plan at the completion of Phase 1 construction, which is anticipated to occur in 2038, and includes all of Scenario 1 plus 1,100,000 square feet of high-density commercial with hotel and retail.
- **Scenario 3:** Phase 2 Operations. This represents full buildout operations of the Specific Plan at the completion of Phase 2 construction, which is anticipated to occur in 2042, and includes 2,500,000 square feet of low-density commercial tech campus.

Operational energy use is estimated for each of these three scenarios.

Electrical Power and Consumption

Electrical power for the Specific Plan would be provided by PCE through PG&E's transmission lines at transmission voltage (115 kV) from the off-site PG&E Martin Substation on Geneva Avenue and a substation to be located on approximately 2 acres of the Specific Plan area. The 115 kV electricity would be stepped down to 12 kV and distributed to the various buildings within the Specific Plan area through new on-site underground distribution lines. Modifications to the PG&E Martin Substation to connect the 250 MW battery storage facility and Baylands development would include a line disconnect switch and line coupling capacitor voltage transformers for the generation tie line, and fiber termination at the Martin Substation.

The Specific Plan's estimated electricity demand was analyzed relative to the state's existing and planned energy supplies in 2035 (the closest projected year to the Specific Plan buildout

year) (CEC 2018). Annual consumption of electricity usage associated with the supply and conveyance of water from operation of the Specific Plan was calculated using demand factors provided in CalEEMod. In addition, the Specific Plan's energy demand was analyzed relative to PG&E's maximum peak demand of 20,118 MW (CISO 2022).

Up to 2,723 EV charging stations would be installed within the Baylands, assuming compliance with CALGreen and Energy Performance Reach Code (Ordinance No. 691) EV charging requirements (24.75 percent of the maximum permitted 11,000 parking spaces). An additional 4,201 EV ready parking spaces would be installed, for a total of 6,924 parking spaces with EV charging infrastructure (approximately 63 percent of the maximum permitted 11,000 parking spaces). Electrical demand from these charging stations was estimated by multiplying the number of charging stations by their d kilowatt capacity and their average estimated annual usage (Thornton Tomasetti Inc. 2023).

Off-site electricity demand from water use associated with operation of the Specific Plan was calculated using CalEEMod and the electrical intensity factors for water supply, treatment, distribution, and wastewater treatment.

Electrical demand for Specific Plan buildings and for project infrastructure (water pump and lift stations, street lighting and traffic signals, parking lot lighting, and the on-site water reclamation facility) was derived from the Specific Plan applicant's energy plan document (Thorton Tomasetti Inc. 2023).

Natural Gas

The Baylands Specific Plan would not extend natural gas service to new development within the Specific Plan area but would retain existing natural gas service to Existing Use Areas. Therefore, the project would not cause changes to natural gas use, and there would be no impact.

Mobile Energy

Energy demand from employees, vendors and suppliers, and visitors traveling to and from the Specific Plan area was estimated based on the predicted number of trips to and from the Specific Plan area taken from the analysis in the Baylands Transportation Impact Analysis (EIR Appendix F.1). Energy use associated with firefighting apparatus that would operate from the Baylands' new on-site firehouse was derived in the same manner.

Based on the Specific Plan's annual mobile-source GHG emissions, gasoline, diesel, and natural gas consumption rates were calculated using the county-specific vehicle fleet mixes in EMFAC2021 and a standard conversion factor from GHG emissions to gallons of fossil fuels (i.e., gasoline, diesel, and natural gas). Electricity use for battery electric vehicles and plug-in hybrid electric vehicles was also based on county-specific vehicle fleet mixes and electricity consumption rates for these vehicles from EMFAC2021. Supporting calculations are provided in Appendix F2 of the Baylands Energy Technical Report (EIR Appendix I).

Emergency Generator Energy Consumption

Emergency generators would be located at all buildings with occupied space greater than 75 feet in height, the relocated fire station, the new fire station, the water recycling facility, the battery storage facility, and the solar farm. The emergency generators would use diesel fuel for testing and maintenance and for emergency generation of electricity in the event of a power outage. Routine proposed maintenance and testing for each of the emergency generators is conservatively assumed to consist of 50 hours run time per year, consistent with the maximum allowed testing time pursuant to the Airborne Toxics Control Measure (ATCM) for Stationary Compression Ignition Engines (17 CCR 93115), plus an additional 100 hours for assumed emergency use.

Emergency generator fuel usage was estimated based on the fuel consumption rate and anticipated size of the generators (i.e., 1,000 horsepower for Tier 4 generators). Additional details on fuel consumption rates and hours of operation for the emergency generators can be found in the Air Quality Technical Report; a separate run of CalEEMod was employed for this purpose.

Landscaping Energy Consumption

Energy use associated with Baylands landscaping maintenance was similarly taken from the *Air Quality Technical Report* and the estimated GHG emissions for the Specific Plan; a separate run of CalEEMod was also undertaken for this purpose. The analysis assumes that only the approximately 18 acres of active recreation areas (Community Fields) and community greens (Sunnydale Park, Baylands Park, and Roundhouse Park) would be actively landscaped, while the remainder of the Specific Plan's open space area would be natural space.

Impact Assessment

Construction

Construction of the Specific Plan would include, among other things:

- Demolition of existing buildings and streets;
- Construction of new buildings, streets, open space;
- Construction of on-site and off-site wet infrastructure, including water, sewer, and stormwater pipelines, pumps, and related facilities;
- Construction of on-site and off-site dry infrastructure, including electricity and telecommunication and internet facilities.[250]

In addition, the Specific Plan would construct on-site renewable energy generation, distributed and utility-scale battery storage, and electrical line undergrounding and construction of new

[250] Consistent with the Specific Plan, natural gas service would not be extended to buildings in the Specific Plan area.

distribution facilities; an on-site switching substation; and connections to as well as improvements and equipment upgrades at PG&E's Martin Substation. New underground transmission lines would connect the Martin Substation to the Specific Plan area and its on-site switching station and battery storage facility. Energy use for construction of these infrastructure improvements is included in this analysis. Specifically, construction-related energy expenditures for the Martin Substation improvements and associated infrastructure such as transmission lines would be primarily in the form of diesel and gasoline fuel for construction equipment and worker trips. The amount of electricity used during construction would be minimal; typical demand would stem from the use of electrically powered hand tools and any construction trailers needed during construction activity. The proposed Martin Substation improvements, including connection of the substation to the Baylands site via a new power line, is estimated to consume approximately 3,400 gallons of gasoline and 13,200 gallons of diesel fuel. These totals are included in the overall Specific Plan construction energy tabulation below.

Table 4.11-2 presents an estimate of the amount of petroleum-based transportation energy that would be consumed annually during Specific Plan construction, including the Martin Substation improvements and connection of the substation to the Baylands site. During Phase 1 construction, which includes the movement of approximately 2.5 million cubic yards of soil from the eastern to the western portion of the site, on- and off-road vehicles would consume an estimated annual average of approximately 90,153 gallons of gasoline and 410,345 gallons of diesel. During Phase 2 project construction, on- and off-road vehicles would consume an estimated annual average of approximately 85,948 gallons of gasoline and 111,895 gallons of diesel.

Table 4.11-2: Average Annual Petroleum-Based Energy Usage during Project Construction

Energy Type	Average Annual Gallons of Fuel Used during Construction	
	Phase 1 (assumed 2025–2037)	Phase 2 (assumed 2038–2042)
Gasoline		
On-Road Construction Vehicles	90,153	85,948
Off-Road Construction Equipment	—	—
TOTAL AVERAGE ANNUAL GASOLINE CONSUMPTION[a]	**90,153**	**85,948**
Diesel		
On-Road Construction Vehicles	188,148	84,109
Off-Road Construction Equipment	222,197	27,786
TOTAL AVERAGE ANNUAL DIESEL CONSUMPTION[a]	**410,345**	**111,895**

SOURCES: Data compiled by Environmental Science Associates in 2024; CalEEMod 2022

NOTES:

Detailed calculations are provided in Appendix F1 of the Baylands Energy Technical Report (EIR Appendix I).

a. Totals may not add up due to rounding.

Because Baylands construction will occur over a nearly 20-year period, electrical consumption for Baylands construction was analyzed qualitatively since the extent to which electric powered equipment might be commercially available during future construction activities to replace non-

electric powered vehicles and equipment could vary substantially and cannot be accurately estimated.

Transportation fuels (gasoline and diesel) are produced from crude oil, which can be domestic or imported from various regions around the world. Based on current proven reserves, crude oil production would be sufficient to meet more than 50 years of worldwide consumption (BP Global 2021). Construction on-road vehicles would comply with CAFÉ fuel economy standards, CARB's Advanced Clean Cars I and II standards, CARB's Advanced Clean Trucks standards, and CARB's Advanced Clean Fleets standards, all of which would result in more efficient use of transportation fuels (lower consumption). Vehicles used for project-related trips would also comply with AB 1493 and the Low Carbon Fuel Standard, which are designed to reduce vehicular GHG emissions, but would also result in additional fuel savings.

Specific Plan construction activities would be required to use fuel-efficient off-road equipment consistent with federal and state regulations, such as the anti-idling regulation in accordance with CCR Title 13, Section 2485; and fuel requirements for stationary equipment in accordance with CCR Title 17, Section 93115 (concerning Airborne Toxic Control Measures). Compliance with the anti-idling and emissions regulations discussed above would result in fuel savings from the use of more fuel-efficient engines. Construction equipment would also be required to comply with federal and state fuel efficiency standards for on-road and off-road construction equipment. As discussed in the Regulatory Context for Baylands Development discussion, stringent emission standards were adopted for off-road construction equipment (i.e., "Tier 4" standards) (40 CFR Parts 1039, 1065, and 1068; 13 CCR, Section 2025; AR 2854). CARB also adopted emission standards for on-road heavy duty diesel vehicles (i.e., haul trucks). (13 CCR, Section 1956.8.) These haul truck regulations mandated fleet turn-over to ensure that nearly all on-road diesel trucks would have 2010 model year engines or equivalent [i.e., Tier 4] by January 1, 2023. CARB regularly evaluates and updates these regulations to implement the best available control measures and implementing every feasible control measure.

In addition, the Specific Plan proposes to meet the minimum diversion requirements identified in the City's Recycling and Diversion of Debris from Construction and Demolition (Chapter 15.75, of the Brisbane Municipal Code) of 65 percent of the nonhazardous construction and/or demolition waste and 100 percent of inert solid material associated with excavations and land clearing operations. This would be accomplished by diverting mixed construction and demolition debris to City-certified construction and demolition waste processors, using City-certified waste haulers, to recycle and/or salvage for re-use.

Diverting mixed construction and demolition debris would reduce truck trips to landfills, which are typically located some distance away from city centers and would increase the amount of waste recovered (e.g., recycled, reused) at material recovery facilities.

Construction activities would use energy for construction worker travel and to transport construction materials and demolition debris to and from the Baylands. Idling restrictions and

the use of cleaner, energy-efficient equipment and vehicles would result in relatively less fuel combustion and energy consumption.

Although there would be a temporary increase in electricity consumption within the Baylands during construction, electrical demand would vary at any given time based on the specific construction activities being performed and would cease upon completion of construction. Electricity use from construction would be short-term, limited to the working hours, used for necessary construction-related activities, and would represent a small fraction of the Specific Plan's net annual operational electricity. Furthermore, the electricity used for off-road construction equipment would have the effect of reducing construction-related emissions of air pollutants and GHGs compared to traditional diesel-powered equipment.

Overall, Baylands construction would not be expected to result in demand for energy greater on a per-unit-of-development basis than other development projects in the region, with the exception that substantial site grading is needed to move 2.5 million cubic yards of soil from atop the former landfill within the eastern portion of the site to the western portion to create final grades and provide adequate protection from flooding and projected sea level rise. Because such grading is required to return the Baylands to a safe and healthy condition, the resulting energy consumption would not result in a wasteful, inefficient, or unnecessary consumption of energy. Although the extent Baylands development is large, construction and development would occur over an anticipated 17-year period, and demand for construction-related electricity and fuels would be spread out over that time frame.

Operations

Operation of residential, commercial, and other uses within the Baylands would consume energy for multiple purposes, including building operations such as HVAC systems, building lighting, and cooking; landscaping equipment; traffic signals; on-site infrastructure including the water recycling facility and water storage tank; irrigation pumps; EV charging stations; the new fire station; and emergency generators. Energy would also be consumed during operations for water supply/conveyance, treatment, distribution, and wastewater treatment; and on-road vehicle trips. Total annual energy consumption at various points during Specific Plan buildout are summarized in **Table 4.11-3** and provided in greater detail in **Table 4.11-4**, **Table 4.11-5**, and **Table 4.11-6**. These tables present the total consumption for electricity, natural gas, gasoline, and diesel for project operation during completion of the first increment of the Baylands solar energy generating field (assumed to be in 2037), completion of Phase 1 development (assumed to be in 2038), and completion of the full Specific Plan (assumed to be in 2042).

Table 4.11-3: Total Annual Specific Plan Area Annual Energy Use

Source	Electricity (MWh/yr)	Natural Gas (MMBtu/yr)[a,b]	Gasoline (gal/yr.)	Diesel (gal/yr.)
Project Operation at Completion of the First Increment of the Proposed On-Site Solar Energy Generation Field (assumed to be in 2037)	145,010	20,723	3,595,123	446,558
Project Operation at Completion of Phase 1 Development (assumed to be in 2038)	155,709	20,392	3,569,797	475,867
Project Operation at full Specific Plan (assumed to be in 2042)	184,592	21,570	4,834,331	585,109

SOURCES: Data compiled by Environmental Science Associates in 2024; Thornton Tomasetti Inc., 2023 (energy use values); CalEEMod, 2022; EMFAC, 2021; California Energy Commission, California Energy Consumption Database, 2023, https://ecdms.energy.ca.gov/; California Energy Commission, California Annual Retail Fuel Outlet Report Results, 2022, https://ww2.energy.ca.gov/almanac/transportation_data/gasoline/piira_retail_survey.html.

ABBREVIATIONS: EV = electric vehicle; gal = gallons; MMBtu/yr = million British thermal units; MWh/yr = megawatts per year

NOTES:

All mobile-source fuel consumption calculated using fleet mixes, vehicle types, fuel efficiencies, and fuel types from EMFAC2021.

a. Natural gas consumption includes consumption of natural gas by vehicles that would travel to or from the Specific Plan area. Values estimated using EMFAC2021.
b. Electricity use includes EV energy consumption not accounted for by on-site EV charging. Natural gas consumption includes non-electric shuttle and transit vehicles.
c. Energy use values from Thornton Tomasetti Inc., 2023.
d. Energy consumption assumes compliance with Tier 1 CALGreen Code requirements.

Table 4.11-4 summarizes the Specific Plan's on- and off-site annual operational energy use at completion of the first increment of the Baylands solar energy generating field (assumed to be in 2037), at which time a portion of Phase 1 development[251] west of the Caltrain right-of-way would be completed and occupied. On-site energy use includes total annual building energy, EV charging, pump and lift stations, parking lot lighting, street lighting, traffic signals, emergency generators, wastewater reclamation facility, landscaping equipment, and fire stations. Off-site energy use includes water use and mobile sources. As shown in **Table 4.11-4**, the Specific Plan's annual energy demand at completion of the first increment of the Baylands solar energy generating field would be approximately 145,010 MWh of electricity,[252] 20,723 million British thermal units (MMBtu) of natural gas, 3,595,123 gallons of gasoline, and 446,558 gallons of diesel.

[251] Completion of the first increment of the proposed on-site solar energy generation field (assumed to be in 2037), would include 13,170,850 square feet of total gross building area. This includes 2,200 dwelling units.

[252] Because the first increment of the Baylands solar energy generating field would become operational at this time, and buildings constructed within Phase 1 would include roof-mounted solar energy generation, a portion of this electrical consumption would be satisfied with renewable energy generated within the Baylands. See discussion of "Energy Neutrality," below for discussion of the extent to which Baylands electrical demands would be met by on-site energy generation and storage systems.

Table 4.11-4: Total Annual On-Site and Off-Site Energy Use during Project Operation at Completion of the First Increment of the Proposed On-Site Solar Energy Generation Field (assumed to be in 2037)

Source	Electricity (MWh/yr)	Natural Gas (MMBtu/yr)[a,b]	Gasoline (gal/yr.)	Diesel (gal/yr.)
Total Annual Building Energy[c,d]	128,386	—	—	—
EV Charging[c,d]	4,160	—	—	—
Pump and Lift Stations[c]	860	—	—	—
Parking Lot Lighting[c,d]	2,567	—	—	—
Street Lighting[c,d]	293	—	—	—
Traffic Signals[c,d]	701	—	—	—
Emergency Generators	—	—	—	69,835
Wastewater Reclamation Facility[c]	1,734	—	—	—
Water Use	436	—	—	—
Landscaping Equipment	—	—	13,677	—
Mobile Sources[c]	5,599	20,723	3,581,446	360,386
Fire Stations	274	—	—	36,337
SPECIFIC PLAN TOTAL ANNUAL USE[e,f]	**145,010**	**20,723**	**3,595,123**	**446,558**

SOURCES: Data compiled by Environmental Science Associates in 2024; Thornton Tomasetti Inc., 2023 (energy use values); CalEEMod, 2022; EMFAC, 2021; California Energy Commission, California Energy Consumption Database, 2023, https://ecdms.energy.ca.gov/; California Energy Commission, California Annual Retail Fuel Outlet Report Results, 2022, https://ww2.energy.ca.gov/almanac/transportation_data/gasoline/piira_retail_survey.html.

ABBREVIATIONS: EV = electric vehicle; gal = gallons; MMBtu/yr = million British thermal units; MWh/yr = megawatts per year

NOTES:

All mobile-source fuel consumption calculated using fleet mixes, vehicle types, fuel efficiencies, and fuel types from EMFAC2021.

a. Natural gas consumption includes consumption of natural gas by vehicles that would travel to or from the Specific Plan area. Values estimated using EMFAC2021.

b. Electricity use includes EV energy consumption not accounted for by on-site EV charging. Natural gas consumption includes non-electric shuttle and transit vehicles.

c. Energy use values from Thornton Tomasetti Inc., 2023.

d. Energy consumption assumes compliance with Tier 1 CALGreen Code requirements.

e. On-site energy use includes total annual building energy, EV charging, pump and lift stations, parking lot lighting, street lighting, traffic signals, emergency generators, wastewater reclamation facility, landscaping equipment, and fire stations.

f. Off-site energy use includes water use and mobile sources.

Table 4.11-5 summarizes the Specific Plan's on- and off-site annual operational energy use for buildout of Phase 1[253] (assumed to be in 2038). On-site energy use includes total annual building energy, EV charging, pump and lift stations, parking lot lighting, street lighting, traffic signals, emergency generators, wastewater reclamation facility, landscaping equipment, and fire stations. Off-site energy use includes water use and mobile sources. As shown in **Table 4.11-5**, the Specific Plan's annual energy demand at the completion of Phase 1 encompassing the entirety of development west of the Caltrain right-of-way would be approximately 155,709 MWh of electricity,[12] 20,392 MMBtu of natural gas, 3,569,797 gallons of gasoline, and 475,867 gallons of diesel.

[253] Buildout of Phase 1 (assumed to be 2038) includes 14,420,850 square feet of total gross building area.

Table 4.11-5: Total Annual On-Site and Off-Site Operational Energy Use at Buildout of Phase 1 (assumed to be 2038)

Source	Electricity (MWh/yr)	Natural Gas (MMBtu/yr)[a,b]	Gasoline (gal/yr.)	Diesel (gal/yr.)
Total Annual Building Energy[c,d]	138,727	—	—	—
EV Charging[c,d]	4,160	—	—	—
Pump and Lift Stations[c]	860	—	—	—
Parking Lot Lighting[c,d]	2,567	—	—	—
Street Lighting[c,d]	293	—	—	—
Traffic Signals[c,d]	701	—	—	—
Emergency Generators	—	—	—	85,587
Wastewater Reclamation Facility[c]	1,734	—	—	—
Water Use	582	—	—	—
Landscaping Equipment	—	—	16,296	—
Mobile Sources	5,811	20,392	3,553,501	353,943
Fire Stations	274	—	—	36,337
SPECIFIC PLAN TOTAL ANNUAL USE[e,f]	**155,709**	**20,392**	**3,569,797**	**475,867**

SOURCES: Data compiled by Environmental Science Associates in 2024; Thornton Tomasetti Inc., 2023 (energy use values); CalEEMod, 2022; EMFAC, 2021; California Energy Commission, California Energy Consumption Database, 2023, https://ecdms.energy.ca.gov/; California Energy Commission, California Annual Retail Fuel Outlet Report Results, 2022, https://ww2.energy.ca.gov/almanac/transportation_data/gasoline/piira_retail_survey.html.

ABBREVIATIONS: EV = electric vehicle; gal = gallons; MMBtu/yr = million British thermal units; MWh/yr = megawatts per year

NOTES:

All mobile-source fuel consumption calculated using fleet mixes, vehicle types, fuel efficiencies, and fuel types from EMFAC2021.

a. Natural gas consumption includes consumption of natural gas by vehicles that would travel to or from the Specific Plan area. Values estimated using EMFAC2021.

b. Electricity use includes EV energy consumption not accounted for by on-site EV charging. Natural gas consumption includes non-electric shuttle and transit vehicles.

c. Energy use values from Thornton Tomasetti Inc., 2023.

d. Energy consumption assumes compliance with Tier 1 CALGreen Code requirements.

e. On-site energy use includes total annual building energy, EV charging, pump and lift stations, parking lot lighting, street lighting, traffic signals, emergency generators, wastewater reclamation facility, landscaping equipment, and fire stations.

f. Off-site energy use includes water use and mobile sources.

Table 4.11-6 summarizes the Specific Plan's on- and off-site annual operational energy use at full buildout[254] (completion of Phase 2 assumed to be in 2042). On-site energy use includes total annual building energy, EV charging, pump and lift stations, parking lot lighting, street lighting, traffic signals, emergency generators, wastewater reclamation facility, landscaping equipment, and fire stations. Off-site energy use includes water use and mobile sources. As shown in **Table 4.11-6**, the Specific Plan's annual net increased energy demand at full buildout (completion of Phase 2 assumed to be in 2042) would be approximately 184,592 MWh of electricity, 21,570 MMBtu of natural gas, 4,834,331 gallons of gasoline, and 585,109 gallons of diesel.

[254] Full Specific Plan buildout (assumed to be 2042) includes 16,920,850 square feet of total gross building area.

Table 4.11-6: Total Annual On-Site and Off-Site Energy Use at Full Specific Plan Buildout (assumed to be 2042)

Source	Electricity (MWh/yr)	Natural Gas (MMBtu/yr)[a,b]	Gasoline (gal/yr.)	Diesel (gal/yr.)
Total Annual Building Energy[c,d]	162,765	—	—	—
EV Charging[c,d]	4,160	—	—	—
Pump and Lift Stations[c]	860	—	—	—
Parking Lot Lighting[c,d]	2,567	—	—	—
Street Lighting[c,d]	293	—	—	—
Traffic Signals[c,d]	701	—	—	—
Emergency Generators	—	—	—	96,089
Wastewater Reclamation Facility[c]	1,734	—	—	—
Water Use	1,804	—	—	—
Landscaping Equipment	—	—	25,442	—
Mobile Sources	9,434	21,570	4,808,889	452,683
Fire Stations	274	—	—	36,337
PROJECT TOTAL ANNUAL USE[e,f]	**184,592**	**21,570**	**4,834,331**	**585,109**

SOURCES: Data compiled by Environmental Science Associates in 2024; Thornton Tomasetti Inc., 2023 (energy use values); CalEEMod, 2022; EMFAC, 2021; California Energy Commission, California Energy Consumption Database, 2023, https://ecdms.energy.ca.gov/; California Energy Commission, California Annual Retail Fuel Outlet Report Results, 2022, https://ww2.energy.ca.gov/almanac/transportation_data/gasoline/piira_retail_survey.html.

ABBREVIATIONS: EV = electric vehicle; gal = gallons; MMBtu/yr = million British thermal units; MWh/yr = megawatts per year

NOTES:

All mobile-source fuel consumption calculated using fleet mixes, vehicle types, fuel efficiencies, and fuel types from EMFAC2021.

a. Natural gas consumption includes consumption of natural gas by vehicles that would travel to or from the Specific Plan area.

b. Electricity use includes EV energy consumption not accounted for by on-site EV charging. Natural gas consumption includes non-electric shuttle and transit vehicles.

c. Energy use values from Thornton Tomasetti Inc., 2023.

d. Energy consumption assumes compliance with Tier 1 CALGreen Code requirements.

e. On-site energy use includes total annual building energy, EV charging, pump and lift stations, parking lot lighting, street lighting, traffic signals, emergency generators, wastewater reclamation facility, landscaping equipment, and fire stations.

f. Off-site energy use includes water use and mobile sources.

Building and Infrastructure Energy

ELECTRICITY

The project will be required to comply with the 2022 Title 24 standards and applicable 2022 CALGreen Code requirements. Therefore, the Specific Plan's buildings and infrastructure would result in a projected annual demand for electricity of approximately 145,010 MWh during Phase 1 when the first increment of the Baylands solar energy generating field comes online (assumed to be 2037), 155,709 MWh for Phase 1 operations (assumed to be 2038), and 184,592 MWh for full Specific Plan buildout (assumed to be 2042), as shown in **Table 4.11-3** through **Table 4.11-6**. The Specific Plan would also provide on-site solar powered infrastructure systems, which are anticipated to generate a total of 92,445 MWh of electricity annually at full buildout.

In addition to complying with the CALGreen Code, the Specific Plan would incorporate project design features necessary to achieve LEED Gold for all buildings or GreenPoint Rated.

NATURAL GAS

The Specific Plan would not extend natural gas service to new uses within the Specific Plan area. Existing natural gas service will be maintained for existing natural gas users outside of the Specific Plan area, including the Kinder Morgan Tank Farm and Golden State Lumber. Research and development use within the Baylands would consume electricity or use on-site propane tanks on an as-required basis.[255]

DIESEL FUEL

In addition to electricity, Specific Plan uses would consume diesel fuel to power emergency backup generators. As shown in **Table 4.11-3** through **Table 4.11-6**, annual diesel consumption for backup generators would total 69,835 gallons during Phase 1 when the first increment of the Baylands solar energy generating field comes online (assumed to be 2037), 85,587 gallons for Phase 1 operations (assumed to be 2038), and 96,089 gallons at full Specific Plan buildout (assumed to be 2042).

Transportation Fuel Energy

GASOLINE, DIESEL, AND NATURAL GAS

During operations, Specific Plan-related vehicle travel would consume petroleum-based fuels (gasoline, diesel, and natural gas) and electricity for vehicular travel to and from the Baylands. Electricity consumed by electric and hybrid electric vehicles is discussed below.

The vehicle fleet that would be used by Baylands employees and visitors would consist primarily of light-duty automobiles and light-duty trucks that are subject to fuel-efficiency standards. Other trips to the Baylands would include trips associated with residential uses, the hotel, conferences, and delivery of goods. Most of these trips would also be subject to fuel-efficiency standards and/or compliance with anti-idling regulations for medium- and heavy-duty vehicles.

As shown in **Table 4.11-3**, the Specific Plan's mobile source petroleum-based fuel consumption would be approximately 5,595,123 gallons of gasoline and 466,558 gallons of diesel fuel annually during Phase 1 when the first increment of the Baylands solar energy generating field comes online (assumed to be 2037). Phase 1 (assumed to be 2038) annual mobile source fuel consumption would be 3,569,797 gallons of gasoline and 475,867 gallons of diesel. At full Specific

[255] Because the extent to which specific future research and development companies within the Baylands might require propane use cannot be determined, the amount of propane use was not estimated.

Plan buildout (assumed to be 2042), annual mobile source petroleum-based fuel consumption would be approximately 4,834,331 gallons of gasoline and 585,109 gallons of diesel.[256]

MOBILE SOURCE ELECTRICAL CONSUMPTION

As shown in **Table 4.11-3** through **Table 4.11-6**, annual electrical consumption by EVs is estimated to be 5,599 MWh when the first increment of the Baylands solar energy generating field comes online (assumed to be 2037), 5,811 MWh for Phase 1 operations (assumed to be 2038), and 9,434 MWh for full Specific Plan buildout (assumed to be 2042). These estimates of electric consumption by EV and plug-in electric vehicles are conservative because they comprise the sum of total vehicle electricity use calculated based on Specific Plan VMT by electric and hybrid vehicles in addition to the anticipated annual electricity use from on-site electric vehicle charging stations (4,160 MWh based on Tier 1 CALGreen requirements).

LOCAL TRANSIT

A fare-free shuttle network would be provided to transport Baylands residents and workers throughout the site and connect the Baylands to downtown Brisbane and existing transit routes. While the *Sustainability Framework for the Baylands* sets a target for use of electric (renewable energy) shuttles, the Specific does not include a requirement for its proposed shuttle system to use zero-emission vehicles.

VEHICLE MILES TRAVELED

As indicated in *Brisbane Baylands Transportation Impact Assessment*, VMT by Baylands residents and employees would be more than 30 percent below the existing regional baseline VMT for both Baylands residents and employees. In addition, Baylands development would result in an 80,000-mile daily decrease in regional (nine-county Bay Area) VMT under cumulative Year 2040 conditions (105,000-mile reduction with construction of Candlestick interchange improvements).

Total Baylands Electricity Use

As shown in **Table 4.11-3** through **Table 4.11-6**, total annual electricity consumption would be approximately 144,010 MWh when the first increment of the Baylands solar energy generating field comes online (assumed to be 2037), 155,709 MWh for Phase 1 operations (assumed to be 2038), and 184,592 MWh for full Specific Plan buildout (assumed to be 2042).

This estimate conservatively excludes the benefits of LEED Gold building design and improvements in demand response attributable to the Title 24 energy standards, which would further reduce peak demand. The Title 24 Building Energy Efficiency Standards include measures that encourage load shifting and demand response. Title 24 energy use performance standards are based on the time-dependent valuation of energy, which uses the value of the

[256] At buildout, Baylands mobile sources would also use a small amount of natural gas—21,570,000 Btu/yr, the energy equivalent of fewer than 200 gallons of gasoline.

electricity or natural gas used at every hour of the year to incentivize load shifting off of the peak use periods.

Total Specific Plan Fossil Fuel Use

As shown in **Table 4.11-3** through **Table 4.11-6**, petroleum-based fuel usage by the Specific Plan's mobile sources would be approximately 3,595,123 gallons of gasoline and 466,558 gallons of diesel fuel during Phase 1 when the first increment of the Baylands solar energy generating field comes online (assumed to be 2037). Phase 1 operations (assumed to be 2038), would consume 3,569,797 gallons of gasoline and 475,867 gallons of diesel. At full Specific Plan buildout (assumed to be 2042), annual consumption would be 4,834,331 gallons of gasoline and 585,109 gallons of diesel.

Vehicles and fuels used for vehicle trips resulting from the Specific Plan would be required to comply with federal CAFÉ fuel economy standards, CARB's Advanced Clean Cars I and II standards, and CARB's Advanced Clean Trucks and Advanced Clean Fleets standards, which would result in more efficient use of transportation fuels (lower consumption). Vehicles used for project-related vehicle trips would also comply as applicable with AB 1493 and the Low Carbon Fuel Standard, which are designed to reduce vehicular GHG emissions, but would also result in additional fuel savings.

The Specific Plan would support state-wide efforts to improve transportation energy efficiency and reduce transportation energy consumption with respect to private automobiles. The Specific Plan's design and characteristics would be consistent with and would not conflict with the goals of Plan Bay Area 2050. As discussed in Impact EN-2, the mixed-use design of the proposed Specific Plan would increase the density of an infill site served by a variety of transit options.

In addition, Specific Plan development would be required to implement several mitigation measures in response to significant air quality and greenhouse gas impacts that would have the benefit of reducing operational fuel use.

Net Energy Consumption

Table 4.11-7 analyzes the 2025 Specific Plan project's net on-site energy demand, which includes all sources of electricity consumed and generated on-site, including total annual building energy, EV charging, pump and lift stations, parking lot lighting, street lighting, traffic signals, emergency generators, landscaping equipment, and fire stations **Table 4.11-7** also includes the proportion of energy use from the water recycling facility that would be required to serve the Specific Plan area (i.e., not total energy consumption generated by this source, since it is a regional facility, and the Specific Plan would only be associated with part of its operation). This table does not include water use and mobile sources because its off-site energy use is electricity generated from outside the Baylands. Energy associated with energy consumed by the proposed recycling facility to generate recycled water for landscape irrigation and other

non-potable uses within the Baylands is, however, included in **Table 4.11-7**. On-site generation includes solar infrastructure systems (building solar, community solar, and utility-scale solar).

Table 4.11-7: Baylands Net On-Site Energy Consumption Analysis

Scenario	Estimated On-Site Electricity Consumption[a] (MWh/yr)	Estimated On-Site Electricity Generation[b] (MWh/yr)	Net Electricity Consumption[c] (MWh/yr)	Percent of Baylands Electrical Demand met by On-Site Generation
Specific Plan with First Increment of On-Site Solar Energy Generation Field and Partial Development of Phase 1 (assumed to be 2037)	138,360	47,317	91,043	34.2%
Phase 1 and Solar Energy Generation Field Buildout (assumed to be 2038)	148,701	74,691	74,010	50.2%
Full Specific Plan Buildout (assumed to be 2042)	172,882	92,445	80,437	53.5%

SOURCE: ESA Associates, 2024; Thornton Tomasetti Inc., 2023.

NOTES: Net energy is estimated by subtracting the energy produced by on-site electricity generation from the on-site energy consumed. On-site electricity includes all sources of electricity consumed and generated on-site.

a. Electricity consumption includes all on-site building and infrastructure electricity use, including buildings, lighting, traffic signals, irrigation, EV charging, and the water storage tank. The electricity consumption associated with the water recycling facility is based on the quantity of electricity consumed by land uses proposed by the Specific Plan. For Phase 1, this rate was developed by dividing on-site Phase 1 and Phase 2 non-potable water consumption (approximately 82,602,481 and 93,193,386 gallons, respectively) by the total capacity of the water reclamation facility (approximately 128,000,000 gallons) (Thornton Tomasetti Inc. 2023). Electricity consumption assumes compliance with 2022 CALGreen Tier 1 standards. This table does not include water use and mobile sources because its off-site energy use is electricity generated from outside the Baylands.

b. Electricity generation includes on-site building solar, community solar, and utility-scale solar (the solar fields). These estimates are based on compliance with 2022 CALGreen Tier 1 standards, but the final actual generation amount could change. This analysis considers estimated PV panel efficiency for 2028 based on Fraunhofer IBP's Photovoltaic Report, 2021 which predicts future PV panel efficiency based on historical trends. The community solar is a 40 MWdc system anticipated to generate approximately 60,967 MWh annually at full build out and includes two phases. Phase 1 is the development of the 55-acre solar field and Phase 2 is the parking lot area adjacent to the Campus East District. Building solar refers to solar located on buildings. At full build out the aggregated solar system is projected to be equivalent to 20 MWdc and generate approximately 31,478 MWh annually (Thornton Tomasetti Inc. 2023).

c. Value is the total electricity generation minus the total on-site electricity consumption.

As shown in **Table 4.11-7**, the Baylands Specific Plan would consume more electricity than it generates on an annual basis during partial development of Phase 1, when the first increment of the Baylands solar energy generating field comes online (assumed to be 2037); during full development of Phase 1, when the solar energy generating field is fully operational (assumed to be 2038); and at full Specific Plan buildout(assumed to be 2042). However, the Baylands would produce over half (53.5 percent or 92,445 MWh) of its total annual on-site electricity consumption via on-site solar powered infrastructure systems. Given the high percentage of the Baylands electricity demand being generated on-site, the Baylands would not result in the wasteful, inefficient, or unnecessary use of electricity.

The Specific Plan's net electricity consumption ranges from 74,010 MWh (with buildout of Phase 1 and the 55-acre solar field, assumed to occur in 2038) to 91,043 MWh (with partial

Specific Plan buildout and the first increment of the 55-acre solar field, assumed to be 2042) that must be generated outside of the Baylands and supplied by the grid.

The analysis provided in **Table 4.11-7** is conservative in that it assumes sufficient distributed battery storage will be provided such that all energy generated by the Baylands' solar energy generation field and building-mounted solar panels would be available for consumption within the Baylands.

Significance Conclusion for Impact EN-1

Construction

Compliance with existing state regulations to minimize fuel use would ensure that project construction activities requiring the use of fossil fuels would not be wasteful, inefficient, or unnecessary. Moreover, Baylands construction would not be expected to result in demand for energy greater on a per-unit-of-development basis than other development projects in the region, with the exception of the necessary grading that is required to return the Baylands to a safe and healthy condition and provide adequate protection from flooding and projected sea level rise.

Therefore, Baylands construction would not result in the wasteful, inefficient, or unnecessary consumption of energy, and impacts would be less than significant.

While mitigation for energy construction impacts is not required, air quality mitigation measures MM AQ-1a, MM AQ-1c, and MM AQ-1i would further reduce energy consumption during Baylands construction.

Operations

The Specific Plan is designed to be an energy efficient development by including a suite of sustainability features including LEED Gold buildings, all-electric buildings, electric vehicle charging, on-site solar powered infrastructure systems, distributed and utility-scale battery storage systems, on-site bicycle and pedestrian trails connecting to off-site trails, and TDM Plans to reduce mobile fuel use. In addition, TDM programs would be implemented to reduce per capita vehicle miles traveled by Baylands residents and employees by more than 30 percent below the existing regional baseline VMT.

The Specific Plan provides for buildings to be designed to be LEED Gold or GreenPoint Rated (based on 2022 rating criteria for LEED and GreenPoint), and residential and non-residential buildings within the Specific Plan area would comply with CALGreen Tier 1 voluntary standards.

Ultimately, Baylands development would have lower per capita energy consumption compared to the Bay Area region due to:

- The combination of the Specific Plan's mixed-use character, location adjacent to transit, provision of a comprehensive on-site trails system with connections to areawide and regional trails, and TDM programs would reduce per capita vehicle miles traveled (VMT) for Baylands residents and employees below the regional average and reduce regional VMT.
- With respect to EV charging, Baylands residential and commercial buildings would be constructed to meet the 2022 CALGreen Tier 1 Voluntary Building Energy Standards and the City's recently adopted Reach Code.
- On-site renewable generation and distributed battery storage would be far greater than is typical of development throughout the Bay Area region.

Therefore, the project would not increase per-capita energy consumption in comparison to the regional baseline.

Baylands development would not increase reliance on fossil fuels or decrease reliance on renewable energy sources because:

- The relatively lower per capita VMT identified above would result in less per-capita fossil fuel consumption than is typical for the Bay Area.
- The project would include substantial on-site solar energy generation and on-site battery storage, thereby reducing the need for fossil-fuel-generated energy and actually increasing reliance on renewable energy.

Therefore, Specific Plan operations would not result in the wasteful, inefficient, or unnecessary consumption of energy, and impacts would be less than significant.

b. Impact EN-2: Consistency with Applicable Programs, Plans, Ordinances, and Policies for Renewable Energy and Energy Efficiency

Methodology for Determining Significance in Relation to Threshold EN-2

Baylands development would be required to comply with CALGreen Code Voluntary Tier 1 standards and Title 24 requirements as adopted by the City of Brisbane to reduce energy consumption by implementing energy-efficient building designs, reducing indoor and outdoor water demands, providing EV charging spaces, and installing energy-efficient appliances and equipment. In addition, Specific Plan development would be required to implement transportation demand measures to meet C/CAG and City of Brisbane requirements to reduce vehicle trip generation. The Specific Plan therefore incorporates all mandatory energy efficiency

requirements. In addition to these mandatory requirements, the Specific Plan requires all buildings to be designed to be LEED Gold or GreenPoint Rated.

To determine whether a significant impact would occur, relevant provisions of the Brisbane General Plan and Plan Bay Area 2050. The consistency of the Baylands Specific Plan with these provisions was then analyzed and is documented in Section 4.3, *Land Use and Planning Policies*, **Table 4.3-2**.

Impact Assessment

Consistency with Plan Bay Area 2050 Energy Related Policies

Evaluation of the Specific Plan's consistency with energy-related Plan Bay Area 2050 Provisions is presented in Section 4.3, *Land Use and Planning Policies*, **Table 4.3-2**.

Consistency with Brisbane General Plan Energy-Related Policies

Evaluation of the Specific Plan's consistency with energy-related General Plan policies is presented in Section 4.3, *Land Use and Planning Policies*, **Table 4.3-2,** along with a detailed evaluation of the Specific Plan's consistency with all relevant Brisbane General Plan policies.

Significance Conclusion for Impact EN-2

The Baylands Specific Plan provides for transit-oriented mixed-use development within an area designated by *Plan Bay Area 2050* as a Priority Development Area and a Transit Priority Area and would provide substantial on-site energy generation; it would not conflict with *Plan Bay Area 2050*.

Impact EN-2 would therefore be less than significant.

4.11.7 REFERENCES – ENERGY RESOURCES

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4.12 NOISE AND VIBRATION

4.12.1 INTRODUCTION

a. Overview

This section of the environmental impact report (EIR) evaluates the noise impacts that would result from the 2025 Baylands Specific Plan project. It discusses the existing noise environment within and around the Baylands, as well as the regulatory framework for regulation of noise and vibration. It also analyzes the on- and off-site effects that Specific Plan development would have on the existing ambient noise environment during construction, demolition, and operational activities, and evaluates the Specific Plan's noise effects for consistency with relevant noise policies and regulations.

The analysis in this section also addresses groundborne vibration impacts and is based on a comprehensive review of existing documentation for the Specific Plan area and the Baylands Noise and Vibration Technical Report prepared by Environmental Science Associates (ESA), for which modeling results are provided in Appendix J.

Specific Plan-related noise effects on biological resources are discussed in Section 4.6, *Biological Resources*.

b. Fundamentals of Noise

"Sound" is mechanical energy transmitted by pressure waves through a medium such as air. "Noise" is defined as unwanted sound. Sound, traveling in the form of waves from a source, exerts a sound pressure level (referred to as sound level) that is measured in decibels (dB), which is the standard unit of sound amplitude measurement. The dB scale is a logarithmic scale that describes the physical intensity of the pressure vibrations that make up any sound, with 0 dB corresponding roughly to the threshold of human hearing and 120 to 140 dB corresponding to the threshold of pain. Pressure waves traveling through air exert a force registered by the human ear as sound.

Sound

Sound always has a source (e.g., construction activities, automobile and rail traffic, jets flying overhead, people talking). The loudness of a sound source is dependent on how rapidly the object converts energy into sound energy. In contrast, an individual's perception of the loudness of a sound depends on his or her distance from the sound source.

Sound pressure fluctuations can be measured in units of hertz (Hz), which correspond to the frequency of a particular sound. Typically, sound does not consist of a single frequency, but

rather a broad band of frequencies varying in levels of magnitude (sound power). When all the audible frequencies of a sound are measured, a sound spectrum is plotted consisting of a range of frequencies spanning 20 to 20,000 Hz. The sound pressure level therefore constitutes the additive force exerted by a sound corresponding to the sound frequency/sound power level spectrum.

The human ear does not hear all frequencies equally and de-emphasizes low and very high frequencies. As a consequence, when assessing potential noise impacts, sound is measured using an electronic filter that deemphasizes the frequencies below 1,000 Hz and above 5,000 Hz, corresponding to the human ear's decreased sensitivity to low and very high frequencies. This method of frequency weighting follows an international standard methodology, is expressed in units of A-weighted decibels (dBA), and is typically applied to community noise measurements. Some representative noise sources and their corresponding A-weighted noise levels are shown in **Table 4.12-1**. Unless specifically stated, all noise levels discussed below are A-weighted.

Noise Exposure and Community Noise

A *noise level* is a measure of noise at a given instant in time, whereas an individual's or community's *noise exposure* is a measure of noise experienced over a period of time. The noise levels presented above in **Table 4.12-1** thus represent noise levels generated by various sources at a given instant in time. However, community noise is primarily the product of many noise sources generated at various locations and times, which combine to form a relatively stable background noise exposure, with the individual sources being unidentifiable. The background noise level changes throughout a typical day but does so gradually with the addition and subtraction of noise sources at various distances, as well as increases and decreases in noise levels generated by individual noise sources such as traffic. What makes community noise variable throughout a day, besides the slowly changing background noise, is the addition of short-duration, single-event noise sources (e.g., aircraft flyovers, motor vehicles, sirens), which are readily identifiable to the individual.

Definition of Noise Descriptors

Because community noise levels change from instant to instant, the measurement of noise exposure is averaged over a period of time, such as an hour or day, to characterize the community noise environment and evaluate noise impacts. This time-varying characteristic of environmental noise is described using the statistical noise descriptors described below.

Ambient noise level is the background noise level associated with a given environment at a specified time and is usually a composite of sound from many sources from many directions, near and far, with no particular dominant sound.

Table 4.12-1: Typical Sound Levels Measured in the Environment

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	110	Rock band
Jet flyover at 1,000 feet		
	100	
Gas lawnmower at 3 feet		
	90	
Diesel truck at 50 feet at 50 mph		Food blender at 3 feet
	80	Garbage disposal at 3 feet
Noisy urban area, daytime		
Gas lawnmower at 100 feet	**70**	Vacuum cleaner at 10 feet
Commercial area		Normal speech at 3 feet
Heavy traffic at 300 feet	**60**	
		Large business office
Quiet urban daytime	**50**	Dishwasher in next room
Quiet urban nighttime	**40**	Theater, large conference room (background)
Quiet suburban nighttime		
	30	Library
Quiet rural nighttime		Bedroom at night, concert hall (background)
	20	
		Broadcast/recording studio
	10	
	0	

SOURCE: Caltrans, 2013. *Technical Noise Supplement to the Traffic Noise Analysis Protocol.* September 2013.
NOTE: Continuous exposure above 85 dBA is likely to degrade the hearing of most people. Range of speech is 50 to 70 dBA.

CNEL, or Community Noise Equivalent Level, which is similar to L_{dn} (see below), is the average A-weighted noise level during a 24-hour day that is obtained after an addition of 5 dBA to measured noise levels between the hours of 7:00 p.m. and 10:00 p.m. and after an addition of 10 dBA to noise levels between the hours of 10:00 p.m. and 7:00 a.m. to account for noise sensitivity in the evening and nighttime, respectively. The CNEL is the metric generally used for assessment of aircraft noise. The result is normally about 0.5 dBA higher than L_{dn} using the same 24-hour data (Caltrans 2013).

L_{dn}, also termed "day-night" average noise level (**DNL**), is a measure of the average of A-weighted sound levels occurring during a 24-hour period, accounting for the greater sensitivity of most people to nighttime noise by weighting noise levels at night ("penalizing" nighttime noises). Noise between 10:00 p.m. and 7:00 a.m. is weighted by adding 10 dBA to account for the greater annoyance of nighttime noises.

L_{eq}, or equivalent-continuous sound level, is used to describe noise over a specified period of time in terms of a single numerical value. The L_{eq} of a time-varying signal and that of a steady signal are the same if they deliver the same acoustic energy over a given time. L_{eq} may also be referred to as the "average sound level."

L_{max} is the maximum instantaneous noise level experienced during a given period of time.

L_{min} is the minimum instantaneous noise level experienced during a given period of time.

L_x is the sound level that is equaled or exceeded by "x" percent of a specified time period. The "x" thus represents the percentage of time a noise level is exceeded. For instance, L_{50} and L_{90} represent the noise levels that are exceeded 50 percent and 90 percent of the time, respectively.

Noise-Sensitive Uses

Noise-sensitive uses are generally defined to include places where people sleep, such as residences, hospitals, and hotels; institutional land uses where it is important to avoid interference with speech or reading, such as schools, libraries, and churches; and outdoor areas where quiet is fundamental to its specific use, such as an amphitheater. Noise may be perceived at a sensitive use as "intrusive" when noise levels exceed ambient noise levels. The relative intrusiveness of a sound depends on the sound's amplitude, duration, frequency, and time of occurrence and tonal or informational content, as well as the prevailing ambient noise level.

Effects of Noise on People

Noise can have four different types of effects on people:

- Subjective effects (e.g., dissatisfaction, annoyance)
- Interference effects (e.g., interference with communication, sleep, and learning)
- Physiological effects (e.g., startle response)
- Physical effects (e.g., hearing loss)

Although exposure to high noise levels can cause physical and physiological effects, the principal human responses to typical environmental noise exposure are subjective and related to interference with activities. Interference effects of environmental noise refer to those effects that interrupt daily activities, including interference with human communication such as normal conversations, television watching, and telephone conversations.

Sleep interference effects can include both awakening and a lesser state of sleep. Nighttime noise can potentially affect sleep. Noise can make it difficult to fall asleep, can create momentary disturbances of natural sleep patterns by causing shifts from deep to lighter stages, and can cause awakening. Although nighttime awakenings occur independent of noise, Fidell, et al.

(2010) provided the following summary of night awakenings: "Depending on the definition adopted for 'awakening,' people may awaken for reasons having nothing to do with noise many times per night, at moments which may or may not closely coincide in time with the occurrence of noise events." According to Basner et al. (2014), "people exhibit an average of 21 electro physiologically detectable arousals per hour of sleep, or about 144 spontaneous arousals per night." Counting both shifts from deeper to lighter sleep states and momentary awakenings, Ollerhead et al. (1992), reported about 45 "awakenings or arousals" per night, of which only 40 percent were thought to represent even momentary awakenings. People commonly attain full waking consciousness two or three times per night for reasons having nothing to do with noise exposure.

The responses of individuals to similar noise events are diverse and are influenced by many factors, including individuals' thresholds of annoyance and tolerances to noise based on past experiences with noise, the type of noise, the perceived importance of the noise, the appropriateness of the noise to the setting, the duration of the noise, the time of day and the type of activity during which the noise occurs, and individual noise sensitivity. Thus, an important way of predicting a person's reaction to a new noise environment is to analyze the difference between the new environment and the existing environment to which that person has adapted (i.e., comparison to the ambient noise environment).

In general, the more a new noise level exceeds the previously existing ambient noise level, the less acceptable the new noise level will be judged by those hearing it. With regard to increases in A-weighted noise level, the following relationships generally occur:

- Except in carefully controlled laboratory experiments, a change of 1 dB cannot be perceived.
- Outside of the laboratory environment, a 3 dB change in noise levels is considered to be a barely perceivable difference.
- A change in noise levels of 5 dB is considered to be a readily perceivable difference.
- A change in noise levels of 10 dB is subjectively heard as doubling of the perceived loudness.

These relationships occur in part because of the logarithmic nature of sound and the decibel system. Since the decibel scale is based on logarithms, two noise sources do not combine in a simple additive fashion, but rather logarithmically. For example, if two identical noise sources produce noise levels of 50 dB, the combined sound level would be 53 dB, not 100 dB.

Health effects from noise have been studied around the world for nearly 30 years. Scientists have attempted to determine if high noise levels can adversely affect human health apart from auditory damage. In a review of 30 studies conducted worldwide between 1993 and 1998, a team of international researchers concluded that, while some findings suggest that noise can affect health, improved research concepts and methods are needed to verify or discredit such a

relationship. The team of international researchers called for more study of the numerous environmental and behavioral factors than can confound, mediate, or moderate survey findings. Until science refines the research process, a direct link between a single source noise exposure and non-auditory health effects remains to be demonstrated (LAWA 2012).

The Occupational Safety and Health Administration has an established noise exposure limit of 90 dBA for 8 hours per day (or higher for shorter duration exposures) to protect an individual from hearing loss (29 Code of Federal Regulations [CFR] 1910.95). Noise levels in neighborhoods, even near a major airport or a major freeway, are not sufficiently loud to cause hearing loss.

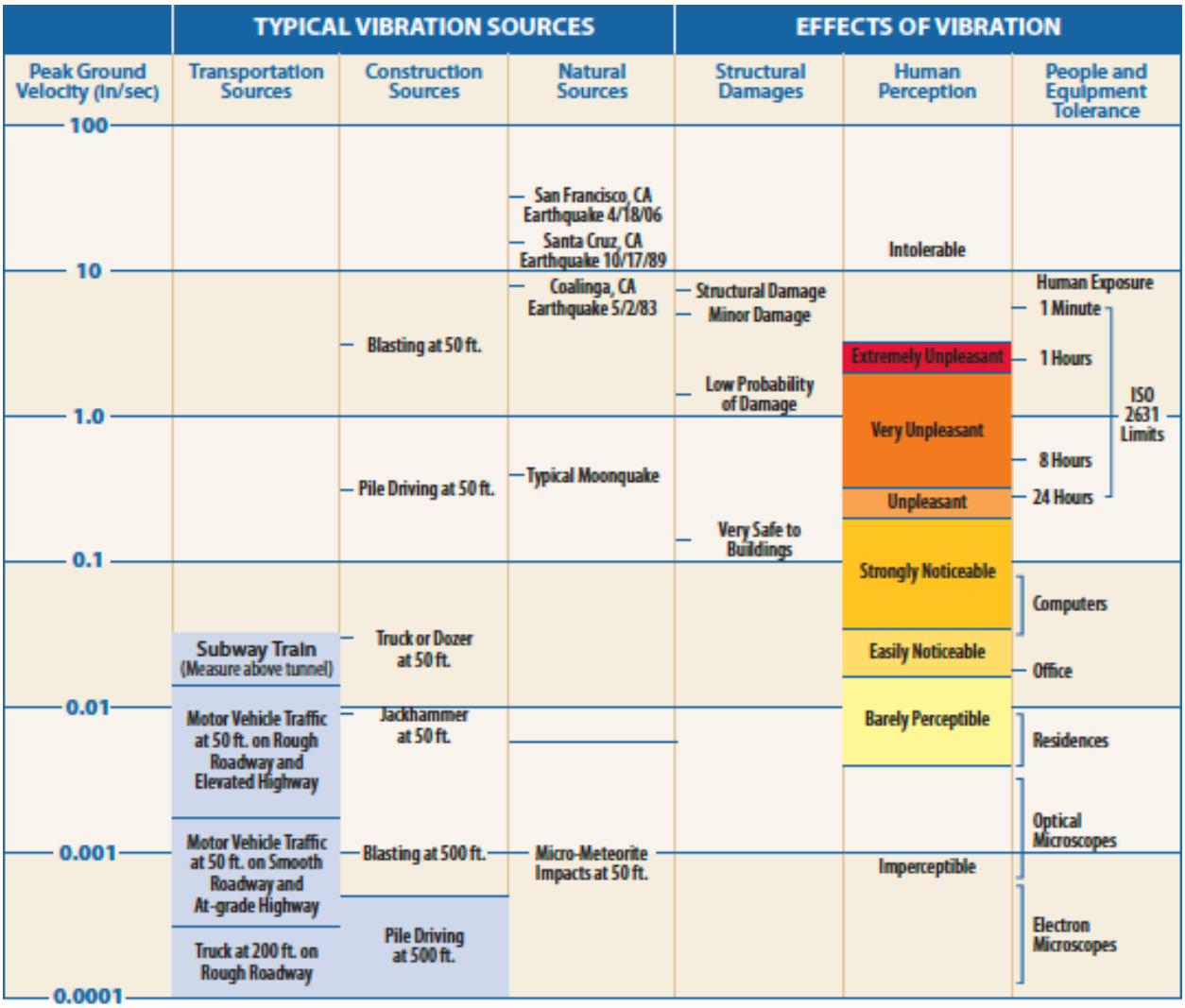
Noise Attenuation

Stationary "point" sources of noise, including stationary mobile sources such as idling vehicles, attenuate (lessen) at a rate between 6 dB for hard sites and 7.5 dB for soft sites for each doubling of distance from the reference measurement, depending on the topography of the area and environmental conditions (e.g., atmospheric conditions, noise barriers [either vegetative or manufactured]). Hard sites are those with a reflective surface between the source and the receiver, such as asphalt or concrete surfaces or smooth bodies of water. No excess ground attenuation is assumed for hard site attenuation (6 dBA per doubling of distance), and the change in noise levels with distance (drop-off rate) is simply the geometric spreading of the noise from the source. Soft sites have an absorptive ground surface such as soft dirt, grass, or scattered bushes and trees. In addition to geometric spreading, an excess ground attenuation value of 1.5 dB (per doubling distance) is normally assumed for soft site attenuation, resulting in the 7.5 dBA reduction per doubling of distance cited above. "Line" sources (such as traffic noise from vehicles) attenuate at a rate between 3 dB for hard sites and 4.5 dB for soft sites for each doubling of distance from the reference measurement.

c. Fundamentals of Vibration

Groundborne vibration can be a serious concern for nearby neighbors of a transit system route or maintenance facility because the vibration can cause buildings to shake and rumbling sounds to be heard. In contrast to airborne noise, groundborne vibration is not a common environmental problem. It is unusual for vibration from sources such as buses and trucks to be perceptible, even in locations close to major roads. Some common sources of groundborne vibration are trains, buses on rough roads, and construction activities such as pile driving and operation of heavy earth-moving equipment. Typical vibration sources and their physical effects are illustrated in **Figure 4.12-1**.

Figure 4.12-1: Typical Vibration Sources and Their Effects



SOURCE: Nugent, R.E. & H. Amick, "Vibration Considerations in Land Use Planning," AEP Environmental Monitor, pp. 5-8 (Summer 1992).

Quantifying Vibration

There are several different methods used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal. The PPV is most frequently used to describe vibration impacts on buildings. The root mean square amplitude is most frequently used to describe the effect of vibration on the human body. The root mean square amplitude is defined as the average of the squared amplitude of the signal. Decibel notation (VdB) is commonly used to measure root mean square. The relationship of PPV to root mean square velocity is expressed in terms of the "crest factor," defined as the ratio of the PPV amplitude to the root mean square amplitude. Peak particle velocity is typically a factor of 1.7 to 6 times greater than root mean square vibration velocity. The decibel notation acts to compress the range of numbers required to describe vibration. Typically, groundborne vibration generated by human activities attenuates rapidly with distance from the source of the vibration.

Effects of Vibration

Sensitive receptors for vibration include structures (especially older masonry structures), people (especially residents, the elderly, and sick), and vibration-sensitive equipment.[257]

The effects of groundborne vibration include movement of building floors, rattling of windows, shaking of items on shelves or hanging on walls, and rumbling sounds. In extreme cases, vibration can damage buildings. Building damage does not typically occur, with the occasional exception of pile driving and blasting during construction. Annoyance from vibration often occurs when vibration levels exceed the threshold of perception by only a small margin. A vibration level that causes annoyance will be well below the damage threshold for normal buildings. The Federal Transit Administration (FTA) measure of the threshold of architectural damage for conventional sensitive structures is 0.2 inch/second (in/sec) PPV (FTA 2018).

In residential areas, the background vibration velocity level is usually around 50 VdB (approximately 0.0013 in/sec PPV). This level is well below the vibration velocity level threshold of perception for humans, which is approximately 65 VdB. A vibration velocity level of 75 VdB is considered to be the approximate dividing line between barely perceptible and distinctly perceptible levels for many people.

4.12.2 ENVIRONMENTAL SETTING

a. Baseline

The baseline used for analysis of the Specific Plan's noise and vibration impacts is the time the Notice of Preparation was issued in April 2023.

b. Existing Noise Environment

Noise Generators within and adjacent to the Baylands

The Specific Plan area adjoins a network of regional transportation facilities that are the predominant noise generators in the area and influence the local noise environment. Major transportation noise generators affecting the Baylands include:

- Rail operations along the Caltrain right-of-way through the Specific Plan area

[257] While there are no specific vibration criteria for vibration effects on animals, the sensitivity of active bird nesting is addressed in Section *4.6 Biological Resources*. The analysis in Section 4.6 discusses designated buffer distances for project activities near active nesting birds consistent with guidance from the California Department of Fish and Wildlife. Buffer distances are related to intensity and duration of activity, and varying bird sensitivity to disturbance.

- The San Francisco Municipal Railway (Muni) Light Rail K/T Line that terminates on Bayshore Boulevard near the western boundary of the Specific Plan area
- The US 101 freeway along the eastern edge of the Specific Plan area
- Vehicular traffic combined with Muni and SamTrans bus service along Bayshore Boulevard

The ambient noise environment within the Baylands is dominated by vehicular traffic on US 101 and Tunnel Avenue, along with intermittent noise from Caltrain commuter trains. Existing industrial uses along Industrial Way and within the adjacent Recology solid waste facility generate intermittent noise from off-road equipment operations and machine shop activities.

Noise Measurements and Modeling

Long-term noise level measurements were conducted within and near the Baylands in February 2023 to establish existing ambient noise conditions. Six short-term (20-minute) measurements were collected within the Baylands. A comparison of the 2013 measurements conducted for the Brisbane Baylands Program EIR to the 2023 measurements demonstrates that there has been relatively little change in the existing noise environment over the 10-year period. For off-site receptor locations, new long-term (48-hour) measurements were collected in February 2023.[258] Additional noise measurements were taken in proximity to the closest residential uses located west, northwest, north, and southwest of the Baylands.

The measured average noise levels (L_{eq}) during different averaging periods are shown in **Table 4.12-2** (long-term) and **Table 4.12-3** (short-term). Noise measurement locations are identified in **Figure 4.12-2**. Additional long-term noise measurements collected as part of the Draft EIR/environmental impact statement (EIS) for the California High-Speed Rail San Francisco to San Jose Segment are included in **Table 4.12-2** and **Table 4.12-13.**

In addition, existing roadside noise levels along roadway segments near the Specific Plan area were modeled to provide estimates of existing weekday noise levels for the roadway segments near the Specific Plan area. The existing roadside noise levels during the weekday peak commute hour are presented in **Table 4.12-4**.[259] These modeled noise levels reflect only the noise generated by traffic on the identified roadway segments; they do not include other sources in the area, such as rail and highway noise where these other sources are nearby. These sources are included in the noise monitoring results in **Table 4.12-2** and **Table 4.12-3**, below.

[258] The noise measurements were conducted using a Larson Davis Model LxT2 sound level meter that was calibrated before use and operated according to the manufacturer's written specifications.

[259] Existing and future traffic volumes provided by the transportation analysis were in the average daily trip metric for weekdays. These values were adjusted to reflect a peak-traffic-hour volume percentage of 5 percent.

Table 4.12-2: Existing Noise Environment in and Adjacent to the Baylands – Long-Term Monitoring

Long-Term (LT) Noise Monitoring Location	Noise Levels (dBA)				Primary Noise Sources
	Day-Night Noise Level (DNL)	24-Hour L_{eq}	Daytime[a] Hourly Average L_{eq}	Nighttime[b] Hourly Average L_{eq}	
On-Site Long-Term Noise Data					
LT-1: Northeast Portion of Baylands[c]	75	69	69	69	Traffic on US 101
LT-2: Southeast Portion of Baylands[c]	69	62	60	63	Traffic on US 101
LT-3: South-Central Portion of Baylands[c]	66	64	65	57	Traffic on Tunnel Avenue and Caltrain operations
LT-4: North-Central Portion of Baylands[c]	65	60	61	58	Traffic on Tunnel Avenue and Caltrain operations
LT-5: Northwest Portion of Baylands[c]	60	56	57	52	Traffic on Tunnel Avenue and Caltrain operations
LT-6: Southwest Portion of Baylands[c]	62	58	59	55	Traffic on Tunnel Avenue and Caltrain operations
Off-Site Long-Term Noise Data					
LT-7: Residence at Terminus of San Francisco Avenue, Brisbane[d]	66	60	61	59	Traffic on Bayshore Blvd. and Caltrain operations
LT-8: Residential Area at Mission Blue Drive, Brisbane[d]	64	59	60	57	Traffic on Guadalupe Canyon Parkway
LT-9: Church at 327 Tunnel Avenue, San Francisco	73	NA	67[e]	NA	Traffic on Tunnel Avenue and Caltrain operations
LT-10: Residence at 18 MacDonald Avenue, Daly City	67	NA	69[e]	NA	Traffic on Bayshore Blvd. and Caltrain operations
LT-11: Residence at 104 Main Street, Daly City	65	NA	67[e]	NA	Traffic on Main Street
LT-12: Residence at 50 Joy Avenue, Brisbane	76	NA	64[e]	NA	Traffic on Bayshore Blvd. and Caltrain operations
LT-13: Residence at 163 Mission Blue Drive, Brisbane (same as LT-8)	65	NA	68[e]	NA	Traffic on Guadalupe Canyon Parkway
LT-14: Residence at 42 San Francisco Avenue, Brisbane (same as LT-7)	65	NA	64[e]	NA	Traffic on Bayshore Blvd. and Caltrain operations

SOURCE: Environmental Science Associates Baylands Noise and Vibration Technical Report, 2025 (Appendix J); California High-Speed Rail Authority, 2019.

ABBREVIATIONS: dBA = A-weighted decibels; L_{eq} = equivalent-continuous sound level; NA = not available.

NOTES:

a. Daytime hours are considered to be from 7:00 a.m. to 10:00 p.m.
b. Nighttime hours are considered to be from 10:00 p.m. to 7:00 a.m.
c. Original data points from 2007 and verified in 2023.
d. Original data point from 2007 updated in 2023.
e. Data points from California High-Speed Rail Draft EIR/EIS monitoring in 2016.

Table 4.12-3: Existing Noise Environment in and Adjacent to the Baylands – Short-Term Monitoring

Short-Term (ST) Noise Monitoring Location	Daytime Noise Level (dBA, L_{eq})	Primary Noise Sources
Short-Term Updates to On-Site Long-Term Locations		
LT-1: Northeast Portion of Baylands	71	Traffic on US 101
LT-2: Southeast Portion of Baylands	74	Traffic on US 101
LT-3: South-Central Portion of Baylands	60	Traffic on Tunnel Avenue and Caltrain operations
LT-4: North-Central Portion of Baylands	56	Traffic on Tunnel Avenue and Caltrain operations
LT-5: Northwest Portion of Baylands	55	Traffic on Tunnel Avenue and Caltrain operations
LT-6: Southwest Portion of Baylands	51	Traffic on Tunnel Avenue and Caltrain operations
Short-Term Monitoring of Representative Off-Site Locations		
ST-1: Residential Area at Sunnydale Avenue and Desmond Street, San Francisco	60	Traffic on Sunnydale Avenue
ST-2: Residences at Main Street, Daly City	62	Traffic on Main Street
ST-3: Residences at Wheeler Avenue, San Francisco	58	Traffic on Lathrop Avenue and Caltrain operations
ST-4 Residential Area at San Bruno Avenue and Tulare Street, Brisbane	62	Traffic on San Bruno
ST-5 Residential Area at Solano Street, Brisbane	54	Traffic on Solano Street

SOURCE: Environmental Science Associates, Baylands Noise and Vibration Technical Report, 2025 (Appendix J of this EIR).

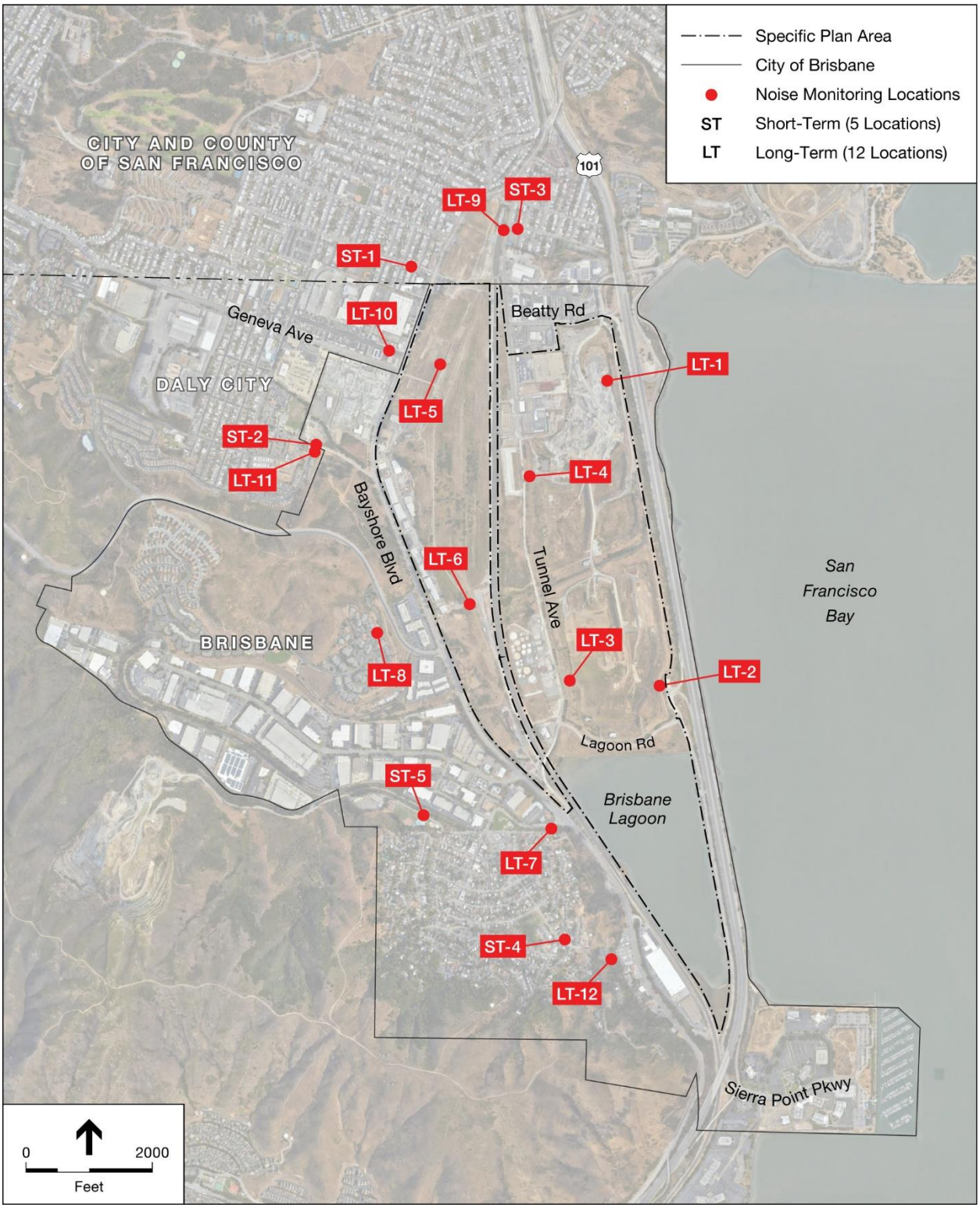
ABBREVIATIONS: dBA = A-weighted decibels; L_{eq} = equivalent-continuous sound level.

Table 4.12-4: Existing Weekday Peak Hour Roadway Traffic Noise

Roadway Segment	Existing Hourly Noise Level (dBA)
Bayshore Boulevard from Blanken Road to Geneva Road	69.2
Bayshore Boulevard from Geneva Avenue to Old County Road/Tunnel Avenue	72.9
Bayshore Boulevard from Old County Road/Tunnel Avenue to Southern City Limits	73.9
Geneva Avenue from Carter Street to Bayshore Boulevard	68.1
Tunnel Avenue from Old County Road/Tunnel Avenue to South of Lagoon Road	65.1
Tunnel Avenue from Blanken Avenue to north of Beatty Road	64.7
Blanken Avenue from Executive Park Boulevard to Gillette Avenue	56.5
Blanken Avenue from Bayshore Boulevard to Tunnel Avenue	60.2
Visitacion Avenue from Bayshore Boulevard to Mansell Street	56.6
Sunnydale Avenue from Bayshore Boulevard to Santos Street	58.4
Main Street from Bayshore Boulevard to Linda Vista Drive	55.8
Guadalupe Canyon Parkway from North Hill Drive	68.7
Old County Road from Bayshore Boulevard to San Francisco Avenue	62.2
San Bruno Avenue from Bayshore Boulevard to Glen Park Way	56.2

SOURCES: Traffic data compiled by Fehr & Peers in 2023 (Appendix F). Noise modeling performed by Environmental Science Associates in 2023.

Figure 4.12-2: Noise Monitoring Locations



Airport Noise

San Francisco International Airport (SFO) is located approximately 3 miles south of the Baylands. Aircraft flights from SFO also contribute to the ambient noise environment. A 1992 survey conducted by the City of Brisbane for its General Plan Noise Element, public comments received on the Brisbane Baylands Program EIR, and noise complaints received by SFO reveal that Brisbane citizens consider the city to be affected by single-event noise levels generated by flights from SFO, especially in the early morning and evening hours. A review of the most recent complaint summary in the 4th Quarter 2023 Brisbane Noise Monitoring Report for SFO indicates that 87 complaints were received from Brisbane residents during the October 2023 monitoring period (SFO 2024).

The City of Brisbane participates in the SFO Community Roundtable, which provides a forum for the public to address local elected officials, airport management, FAA staff, and airline representatives regarding aircraft noise issues. The committee monitors a performance-based aircraft noise mitigation program, as implemented by airport staff; interprets community concerns; and attempts to achieve additional noise mitigation through a cooperative sharing of authority brought forth by the airline industry, the FAA, airport management, and local government officials.

Topography and Noise Perception

Topography plays a role in how noise is perceived within Brisbane. Brisbane's local terrain tends to act as a noise barrier for ground-based noise sources in all directions except toward the mouth of the valley to the east. For example, the hillsides around Brisbane act as noise barriers, blocking noise generated north of the city. This tends to reduce the background sound level, which makes other sounds more noticeable. In addition, the hillside slopes within much of Brisbane mean that homes, like seats in an amphitheater, have a "good view" of noise sources, and noise attenuates less than it would in a typical flat community because buildings are less likely to intercept the line of sight to a noise source.

c. Existing Groundborne Vibration

Sources of vibration in the Baylands vicinity include Caltrain, which bisects the Specific Plan area from north to south. FTA has published generalized ground-surface vibration curves for locomotive-powered passenger and freight trains. These generalized vibration levels are presented in **Table 4.12-5**. Because all local Caltrain operations (44 percent of weekday trains and 100 percent of weekend trains) currently stop at the Bayshore station, speeds for these trains are generally in the range of 5 to 20 miles per hour (mph). The 58 daily express trains do not stop at the Bayshore station during the weekdays and travel through the Specific Plan area at speeds of up to 50 mph.

Table 4.12-5: Generalized Vibration Levels from Locomotive-Powered Passenger or Freight Trains (Vibration Decibels)

Train Speed	Distance from Tracks				
	30 Feet	50 Feet	100 Feet	150 Feet	200 Feet
10 mph	74 VdB	71 VdB	62 VdB	60 VdB	58 VdB
20 mph	80 VdB	77 VdB	68 VdB	66 VdB	64 VdB
30 mph	84 VdB	81 VdB	72 VdB	70 VdB	68 VdB
50 mph	88 VdB	85 VdB	76 VdB	74 VdB	72 VdB

SOURCE: FTA, 2018.

ABBREVIATIONS: mph = miles per hour; VdB = vibration decibels.

NOTE: These levels reflect generalized diesel locomotive activity and do not reflect potential future reductions from electrification of Caltrain or potential future increases from high-speed rail operations.

The only other sources of groundborne vibration in the Baylands vicinity are heavy-duty vehicular travel (e.g., refuse trucks, haul trucks) on local roadways. Trucks traveling at a distance of 50 feet typically generate groundborne vibration velocity levels of around 63 VdB (approximately 0.006 in/sec PPV), and these levels could reach 72 VdB (approximately 0.016 in/sec PPV) where trucks pass over discontinuities in the roadway (FTA 2018).

Vibration measurements in the vicinity of the Baylands were collected for the California High-Speed Rail EIR/EIS in 2016 (see **Table 4.12-6**). The results include the range of maximum overall groundborne vibration levels for each type of train pass-by event based on the distance from the track. The dominant existing vibration sources are train traffic. Traffic on roadways can cause some vibration, but due to the rubber tires on the vehicles, those vibration levels are typically low and isolated to locations close to roadways.

Table 4.12-6: Existing Vibration Levels Monitored in the Baylands Vicinity

Roadway Segment	Distance from Track (feet)	Vibration Level (VdB)
Bayshore Boulevard and Old County Road, Brisbane	25–118	60–73
29 San Francisco Avenue, Brisbane	314–414	36–41

SOURCE: California High-Speed Rail Authority, 2019.

ABBREVIATION: VdB = Vibration decibels.

d. Sensitive Receptors

Some land use types are more sensitive to elevated noise levels than others due to the amount of noise exposure (in terms of both exposure duration and insulation from noise) and the types of activities typically involved. Residences, motels and hotels, schools, libraries, churches, hospitals, nursing homes, and auditoriums generally are more sensitive to noise than commercial and industrial land uses. Sensitive receptors in the Specific Plan area are described below and presented in **Table 4.12-7**, along with their approximate distance to the Specific Plan area boundary.

Table 4.12-7: Existing Noise-Sensitive Receptors within 1,000 Feet of the Specific Plan Area

Type of Sensitive Receptor	Location	Minimum Distance from Specific Plan Area	Representative Monitoring Location[a]
North of the Specific Plan Area			
Single-family residences	221–257 block of Desmond Street, San Francisco	330 feet	LT-10; ST-1
Single-family residences	Sunnydale Avenue, San Francisco	350 feet	LT-10; ST-1
Single-family residences	426–625 block of Wheeler Avenue, San Francisco	900 feet	LT-9; ST-3
Symphony Church of San Francisco	333 Tunnel Avenue, San Francisco	900 feet	LT-9
West of the Specific Plan Area			
Single-family residences	MacDonald Avenue, Daly City	250 feet	LT-10
Single-family residences	100–104 block of Main Street, Daly City	900 feet	LT-11
Southwest of the Specific Plan Area			
Multi-family residential complex	111–163 block of Cliff Swallow Court, Brisbane	900 feet	LT-8
Multi-family residential complex	San Francisco Avenue/Santa Clara Street, Brisbane	500 feet	LT-7

SOURCES: Data compiled by Environmental Science Associates in 2023; Google Earth (imagery date May 2022) for parcel data (address and distance to the Specific Plan area).

NOTES:

a. See **Figure 4.12-2** for long-term (LT) and short-term (ST) monitoring locations.

Receptors sensitive to vibration include:

- Structures (especially older masonry structures). High levels of vibration can damage buildings. Depending on the age of the structure and type of vibration (transient, continuous, or frequent intermittent sources), vibration levels as low as 0.5 to 2.0 in/sec PPV can damage structures.
- Special buildings as defined by FTA (concert halls, TV and recording studios, and theaters), are not present within 1,000 feet of the Specific Plan area.
- Residents, the elderly, and the sick.
- Equipment such as magnetic resonance imaging equipment and high-resolution lithographic, optical, and electron microscopes.

The vibration criteria in Caltrans' Transportation and Construction Vibration Guidance Manual (2020) rely on the FTA Guidance Manual.

4.12.3 REGULATORY CONTEXT FOR BAYLANDS DEVELOPMENT

a. Federal Laws, Programs, and Regulations

Noise

U.S. Occupational Safety and Health Administration Noise Regulations

The primary federal noise standards that would regulate Specific Plan-related noise address noise exposure and workers. The U.S. Occupational Safety and Health Administration (OSHA) enforces regulations to safeguard the hearing of workers exposed to occupational noise. OSHA has established worker noise exposure limits that vary with the duration of the exposure and requires implementation of a hearing conservation program if employees are exposed to noise levels in excess of 85 dBA.

Federal Noise Standards for Trucks

Federal regulations also establish noise limits for medium and heavy trucks (more than 4.5 tons, gross vehicle weight rating) under Title 40, Part 205, Subpart B of the Code of Federal Regulations (CFR). The federal truck pass-by noise standard is 80 dB at 15 meters from the vehicle pathway centerline. These controls are implemented through regulatory controls on truck manufacturers.

U.S. Department of Housing and Urban Development Noise Abatement and Control

The U.S. Department of Housing and Urban Development (HUD) environmental noise regulations are set forth in CFR Title 24, Part 51, Subpart B, Noise Abatement and Control. According to the regulations, "It is HUD's general policy to provide minimum national standards applicable to HUD programs to protect citizens against excessive noise in their communities and places of residence." These regulations include criteria for assessing whether a HUD project is suitable for a particular site, given the background noise levels. HUD has defined the suitability of a site for new housing construction based on existing noise levels as follows:

- Acceptable—65 dB day-night average sound level (DNL) or less;
- Normally Unacceptable—Exceeding 65 dB DNL but not exceeding 75 dB DNL; and
- Unacceptable—Exceeding 75 dB DNL.

The HUD regulations also include a goal (rather than a standard) that interior noise levels not exceed 45 dB DNL. Sound-attenuating features such as barriers or sound-attenuating building materials must be used to achieve the interior noise goal where feasible. Standard building construction generally provides 20 dB DNL of sound attenuation; therefore, if the exterior noise environment is classified as "acceptable," according to HUD standards, the interior noise

environment should not exceed 45 dB DNL. The HUD regulations also encourage the use of quieter construction equipment and methods.

Federal Highway Administration Noise Abatement Criteria

CFR Title 23, Part 772 is the federal regulation governing traffic noise impacts. A federal or federally funded project is considered to have a traffic noise impact if it involves the construction of a new highway, or includes substantial modification of an existing highway, where the project would result in a substantial operational noise increase or where the predicted operational noise level approaches or exceeds the Federal Highway Administration (FHWA) Noise Abatement Criteria. In this case, a "substantial increase" is not defined by the FHWA but is generally defined by the state and/or local governing agencies. The noise level is defined as "approaching" the Noise Abatement Criteria if it is within 1 dB of the applicable criterion. **Table 4.12-8** summarizes the FHWA Noise Abatement Criteria as presented in the U.S. Department of Transportation/FHWA Highway Traffic Noise Analysis and Abatement Policy and Guidance document.

Table 4.12-8: Summary of Federal Highway Administration (FHWA) Noise Abatement Criteria

Activity Category	Hourly Average Noise Level (L_{eq}, dBA)	Description of Activities
A	57 Exterior	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67 Exterior	Picnic areas, recreation areas, playgrounds, active sport areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals.
C	72 Exterior	Developed lands, properties, or activities not included in categories A or B above.
D	—	Undeveloped lands.
E	52 Interior	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.

SOURCE: U.S. Department of Transportation, 2011, cited in *Plan Bay Area 2050 Draft EIR*, 2021.

Federal Transit Administration Construction Noise Guidelines

In addition to addressing transit operations noise, the Federal Transit Administration (FTA) offers guidance with respect to the evaluation of transit construction noise exposure. Like the operational noise criteria, construction noise criteria are intended to consider the existing (ambient) noise environment. Additionally, construction noise exposure should consider the duration of construction activities and the receiving land use (i.e., sensitivity of receiver). FTA construction noise guidelines are summarized in **Table 4.12-9**.

Table 4.12-9: Federal Transit Administration (FTA) Construction Noise Criteria

Affected Land Use	Hourly L_{eq} dBA		8-Hour L_{eq} dBA	
	Daytime (7:00 a.m.–10:00 p.m.)	Nighttime (10:00 p.m.–7:00 a.m.)	Daytime (7:00 a.m.–10:00 p.m.)	Nighttime (10:00 p.m.–7:00 a.m.)
Residential	90	80	80	70
Commercial	100	100	85	85
Industrial	100	100	90	90

SOURCE: FTA, 2008, cited in *Plan Bay Area 2050 Draft EIR*, 2021.

NOTES: In urban areas with very high noise levels, construction noise should not exceed ambient noise levels plus 10 dB.

Federal Aviation Regulations Part 150, Noise

Federal Aviation Administration (FAA) Order 1050.1E, FAA Order 5050.4B, and Title 14 - Aeronautics and Space Chapter I - Federal Aviation Administration, Department of Transportation Subchapter I - Airports Part 150 - Airport Noise Compatibility Planning (FAR Part 150) provide the regulatory framework for noise related to aircraft operations. Appendix A of FAR Part 150 states that "for the purpose of compliance with this part, all land uses are considered to be compatible with noise levels less than DNL (or CNEL in California) 65 dB. Local needs or values may dictate further delineation based on local requirements or determinations."

Vibration

Federal Transit Administration Standards Evaluating for Building Damage from Construction Vibration

FTA has adopted vibration standards that are used to evaluate potential building damage impacts related to construction activities. The vibration damage criteria adopted by FTA are shown in **Table 4.12-10**.

Table 4.12-10: Construction Vibration Damage Criteria

Building Category	Vibration Level at Which Damage May Occur PPV (in/sec)
I. Reinforced concrete, steel, or timber (no plaster)	0.5
II. Engineered concrete and masonry (no plaster)	0.3
III. Non-engineered timber and masonry buildings	0.2
IV. Buildings extremely susceptible to vibration damage	0.12

SOURCE: FTA, 2018.

ABBREVIATIONS: in/sec = inches per second; PPV = peak particle velocity.

Federal Transit Administration Standards for Evaluating Human Annoyance from Vibration

In addition, FTA has adopted standards for evaluating human annoyance for groundborne vibration impacts for the following three land use categories:

- **Category 1—High Sensitivity:** Buildings where vibration would interfere with operations within the building, including vibration-sensitive research and manufacturing facilities, hospitals with vibration-sensitive equipment, and university research operations. Vibration-sensitive equipment includes, but is not limited to, electron microscopes, high-resolution lithographic equipment, and normal optical microscopes.
- **Category 2—Residential:** All residential land uses and any buildings where people sleep, such as hotels and hospitals.
- **Category 3—Institutional:** Land uses such as schools, churches, other institutions, and quiet offices that do not have vibration-sensitive equipment but still have the potential for activity interference.

Under conditions where there are an infrequent number of events per day, FTA has established thresholds of 65 VdB for Category 1 buildings, 80 VdB for Category 2 buildings, and 83 VdB for Category 3 buildings.[260] Under conditions where there are an occasional number of events per day, FTA has established thresholds of 65 VdB for Category 1 buildings, 75 VdB for Category 2 buildings, and 78 VdB for Category 3 buildings.[261] No thresholds have been adopted or recommended for commercial and office uses.

b. State Laws, Plans, Programs, and Regulations

Noise

Title 24, California Building Code

State regulations related to noise include requirements for the construction of new hotels, motels, apartment houses, and dwellings other than detached single-family dwellings that are intended to limit the extent of noise transmitted into habitable spaces. These requirements, collectively known as the California Noise Insulation Standards are found in the California Code of Regulations, Title 24, Part 2 (known as the California Building Code), Appendix Chapters 12 and 12A. For limiting noise transmitted between adjacent dwelling units, the noise insulation standards specify the extent to which walls, doors, and floor ceiling assemblies must block or absorb sound.

[260] "Infrequent events" is defined by FTA as being fewer than 30 vibration events of the same kind per day.
[261] "Occasional events" is defined by FTA as between 30 and 70 vibration events of the same source per day.

For limiting noise from exterior sources, the noise insulation standards set forth an interior standard of DNL 45 dBA in any habitable room and, where such units are proposed in areas subject to noise levels greater than DNL 60 dBA, require an acoustical analysis demonstrating how dwelling units have been designed to meet this interior standard. If the interior noise level depends upon windows being closed, the design for the structure must also specify a ventilation or air conditioning system to provide a habitable interior environment. Title 24 standards are enforced in the City of Brisbane through the building permit application process.

Guidelines for Land Use and Noise Exposure

The California Department of Public Health has established guidelines for evaluating the compatibility of various land uses as a function of community noise exposure. These guidelines for land use and noise exposure compatibility are shown in **Table 4.12-11**. In addition, Section 65302(f) of the California Government Code requires each county and city in the state to prepare and adopt a comprehensive long-range general plan for its physical development, with Section 65302(g) requiring a noise element to be included in the general plan. The noise element must (1) identify and appraise noise problems in the community, (2) recognize Office of Noise Control guidelines, and (3) analyze and quantify current and projected noise levels.

Noise Limits for Vehicles

The State of California also establishes noise limits for vehicles licensed to operate on public roads. For heavy trucks, the state pass-by standard is consistent with the federal limit of 80 dB. The state pass-by standard for light trucks and passenger cars (less than 4.5 tons, gross vehicle rating) is also 80 dB at 15 meters from the centerline. These standards are implemented through controls on vehicle manufacturers and by legal sanction of vehicle operators by state and local law enforcement officials.

Caltrans Construction Noise Standards

California Department of Transportation (Caltrans) Standard Specifications, Section 14-8.02, Noise Control, establishes a construction noise exposure/production limit of 86 dB (L_{max}) at a distance of 50 feet. Additionally, this specification establishes that all internal combustion engines should be equipped with manufacturer-recommended mufflers and that no internal combustion engines may be operated without mufflers.

Table 4.12-11: State of California Community Noise Compatibility Guidelines (DNL or CNEL)

Land Use	Normally Acceptable[a]	Conditionally Acceptable[b]	Normally Unacceptable[c]	Clearly Unacceptable[d]
Single-Family Homes, Duplexes, Mobile Homes	50–60	55–70	70–75	above 75
Multi-Family Homes	50–65	60–70	70–75	above 75
Schools, Libraries, Churches, Hospitals, Nursing Homes	50–70	60–70	70–80	above 80
Transient Lodging—Motels, Hotels	50–65	60–70	70–80	above 75
Auditoriums, Concert Halls, Amphitheaters	—	50–70	—	above 70
Sports Arenas, Outdoor Spectator Sports	—	50–75	—	above 75
Playgrounds, Neighborhood Parks	50–70	—	67–75	above 75
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50–75	—	70–80	above 80
Office Buildings, Business and Professional, Commercial	50–70	67–77	above 75	—
Industrial, Manufacturing, Utilities, Agriculture	50–75	70–80	above 75	—

SOURCE: Governor's Office of Planning and Research, 2017.

ABBREVIATIONS: CNEL = community noise equivalent level; DNL = day-night average noise level.

NOTES:

a. Normally Acceptable: Specified land use is satisfactory, based on the assumption that any buildings involved are of normal conventional construction without any special noise insulation requirements.
b. Conditionally Acceptable: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning, will normally suffice.
c. Normally Unacceptable: New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.
d. Clearly Unacceptable: New construction or development should generally not be undertaken.

Vibration

There are no state vibration standards directly applicable to the 2025 Baylands Specific Plan project. While the Caltrans *Transportation and Construction Vibration Guidance Manual* (2020) does not provide official Caltrans standards for vibration, it provides guidelines for assessing vibration damage potential in various types of buildings. The manual is meant to provide guidance related to vibration issues associated with the construction, operation, and maintenance of Caltrans projects. Caltrans vibration criteria for assessing structural damage and human perception are shown in **Table 4.12-12** and **Table 4.12-13**, respectively.

Table 4.12-12: Caltrans Criteria for Vibration Damage Potential

Structure and Condition	Maximum PPV (in/sec)	
	Transient Sources[a]	Continuous/ Frequent Sources[b]
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.2	0.1
Historic and some old buildings	0.5	0.25
Older residential structures	0.5	0.3
New residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5

SOURCE: Caltrans, 2020.

NOTES:

a. Transient sources create a single isolated vibration event, such as blasting or drop balls.
b. Continuous/frequent intermittent sources include impact pile drivers, "pogo-stick" compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

Table 4.12-13 Caltrans Criteria for Vibration Annoyance Potential

Structure and Condition	Maximum PPV (in/sec)	
	Transient Sources[a]	Continuous/ Frequent Sources[b]
Barely Perceptible	0.04	0.01
Distinctly Perceptible	0.25	0.04
Strongly Perceptible	0.9	0.10
Severe	2.0	0.4

SOURCE: Caltrans, 2020.

NOTES:

a. Transient sources create a single isolated vibration event, such as blasting or drop balls.
b. Continuous/frequent intermittent sources include impact pile drivers, "pogo-stick" compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

c. Regional Plans and Programs

San Francisco International Airport (SFO) Land Use Comprehensive Use Plan

The Specific Plan area is approximately 3.5 miles northwest of SFO and approximately 4 miles from the nearest SFO runway. The City/County Association of Governments of San Mateo (C/CAG), which is the designated Airports Land Use Commission for San Mateo County, has developed and is implementing the *San Mateo County Comprehensive Airport Land Use Plan for the Environs of San Francisco International Airport*. The SFO Airport Land Use Plan applies to areas that are located within the designated Airport Influence Area boundary established and defined by the Airport Land Use Plan. Airport Influence Area boundaries define areas where height, noise, overflight, and safety standards, policies, and criteria are applied to certain proposed land use policy actions. The Specific Plan area is located within the Airport Influence Area "A," which encompasses the entirety of San Mateo County.

Within Area A, Section 11010 of the Business and Professions Code requires people offering subdivided property for sale or lease to disclose the presence of all existing and planned airports within 2 miles of the property. The law requires that, if the property is within an Airport Influence Area designated by the airport land use commission, a notification must be included in the notice of intention to offer the property for sale. The notification must indicate that the property may be subject to some of the annoyances or inconveniences associated with proximity to airport operations (e.g., noise, vibration, odors).

Airport Influence Area B is based on a combination of the outer boundaries of the noise compatibility and safety zones. In accordance with guidance provided in Federal Aviation Regulation (FAR) Part 150, the Airport Land Use Plan includes Noise Exposure Maps that depict CNEL noise contours of CNEL 65 dBA, 70 dBA, and 75 dBA. As shown in **Figure 4.12-3**, the Specific Plan area is located outside the 65 dBA CNEL contour.

City and County of San Francisco Plans, Ordinances, and Regulations

The northern portion of the Specific Plan area lies along the border with the City and County of San Francisco and many of the closest receptors to the northern portion of the Specific Plan area are located within San Francisco.

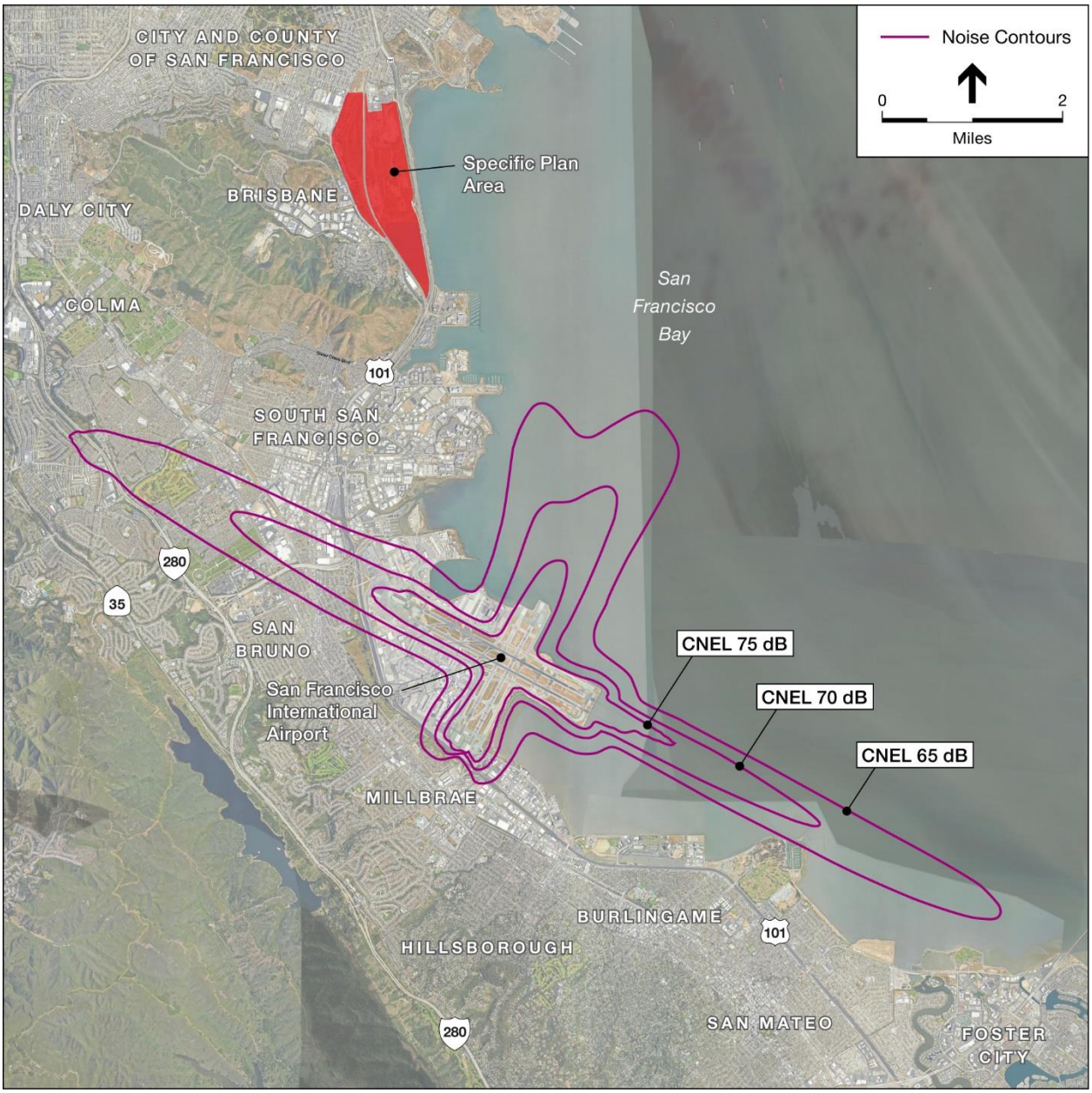
San Francisco General Plan

Land Use Compatibility Guidelines

The Environmental Protection Element of the San Francisco General Plan contains Land Use Compatibility Guidelines for Community Noise for determining the compatibility of various land uses with different noise levels (see **Table 4.12-14**). These guidelines, which are similar to the State of California's guidelines (see **Table 4.12-11**), indicate maximum acceptable noise levels for various land uses.

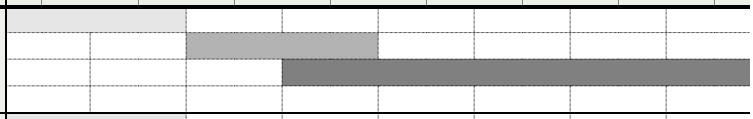
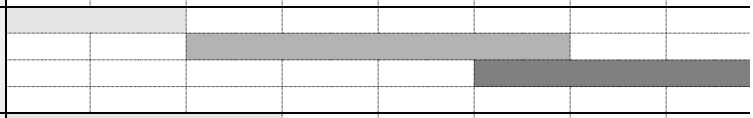
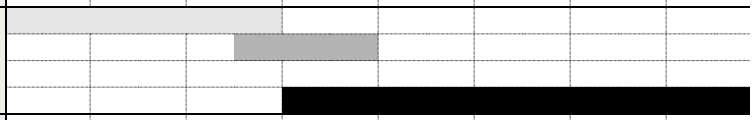
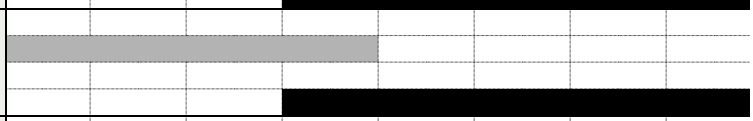
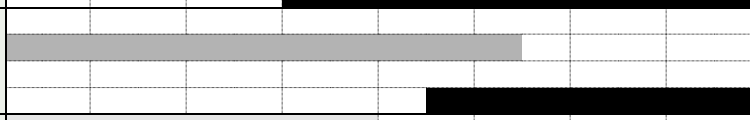
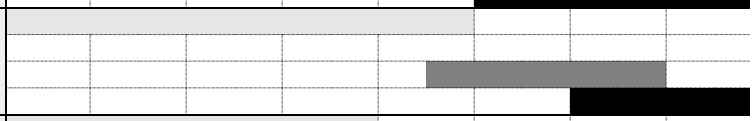
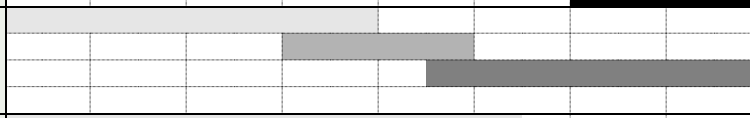
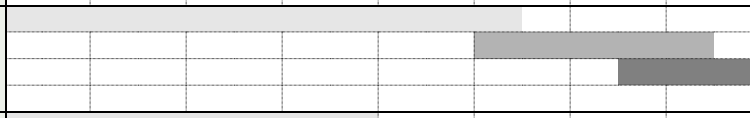
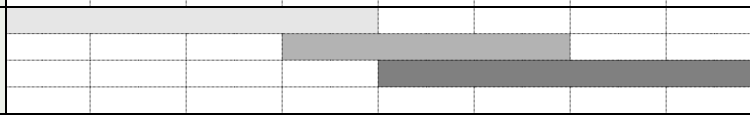
Although this table presents a range of noise levels that the City and County of San Francisco considers compatible or incompatible with various land uses, as shown in **Table 4.12-8**, the maximum satisfactory noise level (the upper limit where a noise exposure level is still considered "satisfactory") is 60 dBA (L_{dn}) for residential and hotel uses; 65 dBA (L_{dn}) for school classrooms, libraries, churches, and hospitals; 70 dBA (L_{dn}) for playgrounds, parks, office uses, retail commercial uses, and noise-sensitive manufacturing/communications uses; and 77 dBA (L_{dn}) for other commercial uses such as wholesale, some retail, industrial/manufacturing, transportation, communications, and utilities.

Figure 4.12-3: San Francisco International Airport Existing Noise Contours



SOURCE: ESA, 2023.

Table 4.12-14: San Francisco Land Use Compatibility Guidelines for Community Noise

Land Use Category	Sound Levels and Land Use Consequences (L_{dn} Values in dBA)
	55 60 65 70 75 80 85
Residential – All Dwellings, Group Quarters	
Transient Lodging – Motels, Hotels	
School Classrooms, Libraries, Churches, Hospitals, Nursing Homes, etc.	
Auditoriums, Concert Halls, Amphitheaters, Music Shells	
Sports Arenas, Outdoor Spectator Sports	
Playgrounds, Parks	
Golf Courses, Riding Stables, Water-Based Recreation Areas, Cemeteries	
Office Buildings – Personal, Business, and Professional Services	
Commercial – Wholesale and Some Retail, Industrial/Manufacturing, Transportation, Communication, and Utilities	
Manufacturing – Noise-Sensitive Communications – Noise-Sensitive	

SOURCE: City and County of San Francisco, 1996.

ABBREVIATIONS: L_{dn} = day-night noise level; dBA = a-weighted decibel.

NOTES:

Satisfactory, with no special noise insulation requirements. Noise levels in this range are considered "Acceptable."

New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Noise levels in this range are considered "Conditionally Acceptable."

New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design. Noise levels in this range are considered "Conditionally Unacceptable."

New construction or development should generally not be undertaken. Noise levels in this range are considered "Unacceptable."

Objectives and Policies

The Environmental Protection Element of the General Plan includes the following objectives and policies that pertain to noise:

- **Objective 9:** Reduce Transportation-related Noise
    - *Policy 9.2:* Impose traffic restrictions to reduce transportation noise;
    - *Policy 9.6:* Discourage changes in streets that will result in greater traffic noise in noise-sensitive areas;
- **Objective 10:** Minimize the impact of noise on affected areas;
    - *Policy 10.1:* Promote site planning, building orientation and design, and interior layout that lessen noise intrusion;
    - *Policy 10.2:* Promote the incorporation of noise insulation materials in new construction;
    - *Policy 10.3:* Construct physical barriers to reduce noise transmission from heavy traffic carriers; and
- **Objective 11:** Promote land uses that are compatible with various transportation noise levels.

San Francisco Municipal Code

Construction Noise Ordinance Article 29, Sections 2907 and 2908 regulate construction equipment and construction work at night, while Section 2909 provides for limits on any machine, device, music or entertainment, or any combination of such sources. Sections 2907 and 2908 are enforced by San Francisco Public Works (Public Works), and Section 2909 is enforced by the San Francisco Department of Public Health. Summaries of these and other relevant sections are presented below.

Construction Noise Regulations

San Francisco Noise Ordinance Section 2907(a) limits noise from construction equipment to 80 dBA when measured at a distance of 100 feet from such equipment, or an equivalent sound level at some other convenient distance. Exemptions to this requirement include impact tools with approved mufflers, pavement breakers, and jackhammers with approved acoustic shields, and construction equipment used in connection with emergency work. However, Section 2907(b) requires that all such equipment be used with manufacturer-approved acoustic shields. Noise Ordinance Section 2908 prohibits nighttime construction (between 8:00 p.m. and 7:00 a.m.) that generates noise exceeding the ambient noise level by 5 dBA at the nearest property line unless the City and County of San Francisco has issued a special permit.

Regulations for Mechanical Equipment and Other Noise

San Francisco Noise Ordinance Section 2909 generally prohibits fixed mechanical equipment noise and music in excess of 5 dBA above the ambient noise level from residential sources, 8 dBA more than the ambient noise level from commercial sources, and 10 dBA more than the ambient noise level on public property at a distance of 25 feet or more. Specifically, on public property, Section 2909(c) generally prohibits noise produced by any machine or device, or any combination of the two, that exceeds the local ambient noise level more than 10 dBA at a distance of 25 feet or more unless the machine or device is being operated to serve or maintain the property.

The standards in Section 2909(d)—45 dBA between 10:00 p.m. and 7:00 a.m. and 55 dBA between 7:00 a.m. and 10:00 p.m.—are the absolute maximum allowable level of interior noise produced from any combination of mechanical device(s) and audio systems(s) under one ownership/use originating from outside the dwelling unit. The standards in this section may not apply to areas in which the ambient noise level exceeds the limits.

City of Daly City Plans, Ordinances, and Programs

The northwestern portion of the Specific Plan area is located adjacent to the City of Daly City and many of the closest receptors to that portion of the Specific Plan area are located within the City of Daly City.

Daly City General Plan

The Daly City General Plan Noise Element contains the following noise and vibration policies and actions:

Policy NE-2: Use the State Office of Noise Control Guidelines as a guide to assess development that will need additional noise study and mitigations.

Task NE-2.1: Use the Noise Control Guidelines to assess the suitability of a site for new development in combination with the noise contours to accurately identify areas that may need additional noise study and mitigation. Noise mitigations include additional insulation, double glazing of windows and increasing building setbacks from the noise source. Mitigations should also be creative and attractive whenever possible and appropriate. Creative noise mitigation measures can include incorporation of fountains using water to mask freeway noise and noise walls of an appropriate scale painted with decorative murals.

Policy NE-3: Maintain a CNEL level of not more than 70 dBA L_{eq} in residential areas.

Task NE-3.1: Continue to enforce the environmental noise requirements of the State Building Code (Title 24).

Task NE-3.2: Encourage noise insulation programs in areas that do not meet the current noise standard and ensure that future development is mitigated appropriately or avoided in areas where the noise levels exceed or are projected to exceed 70 dBA, L_{eq}.

Daly City Municipal Code

Daly Municipal Code Section 9.22.030 prohibits "any noise, music, sound or other disturbance… which may be heard by, or which noise disturbs or harasses, any other person beyond the confines of the property, quarters or apartment from which the noise, music, sound or disturbance emanates" between the hours of 10:00 p.m. and 6:00 a.m. of the following day.

Municipal Code Section 17.39.100 limits normal maintenance of wireless telecommunications facilities to between the hours of 7:00 a.m. and 5:00 p.m., Monday through Saturday, "excluding emergency repairs, unless the carrier requests and receives approval through a use permit or an administrative use permit for a different maintenance period." Backup generators for wireless telecommunications facilities may only be operated during power outages or for testing and maintenance between the hours of 7:00 a.m. and 5:00 p.m., Monday through Saturday.

City of South San Francisco Plans, Ordinances, and Regulations

South San Francisco General Plan

The South San Francisco General Plan provides the following noise and vibration policy direction:

GOAL NOI-1: Residents and employees of South San Francisco are exposed to acceptable noise levels.

Policy NOI-1-1: Ensure new development complies with Noise Compatibility guidelines. Ensure that all new development within the city complies with the Land Use/Noise Compatibility guidelines shown in Table 11.

Policy NOI-1.2: Enforce Noise Performance Standards. The City enforces the Noise Ordinance noise performance standards.

Table 11: Land Use/Noise Compatibility Matrix to Guide New Development

Land Use Categories		CNEL	
Categories	**Compatible Uses**	**Interior[a]**	**Exterior[b]**
Residential	Single Family, Duplex, Multiple Family, Mobile Homes, Residential Care	45[c]	65[d]
Commercial	Hotel, Motel, Transient Lodging	45[c]	65[d]
	Office Buildings, Research and Development, Professional Offices	55	—
	Amphitheater, Concert Hall, Auditorium, Meeting Hall, Movie Theater	50	—
	Manufacturing, Warehousing, Wholesale, Utilities	65	—
Open Space	Parks, Neighborhood Parks, Playgrounds	—	65[d]
Institutional/Public Facility	Hospitals, Schools, Classrooms	45[c]	65[d]
	Churches, Libraries	45[c]	—

INTERPRETATION:

a. Interior environment excludes bathrooms, toilets, closets, and corridors.
b. Outdoor environment limited to private yard of single family residential, multifamily residential, and mobile home park outdoor common space area; hospital patio; park picnic area; and hotel and motel recreation area.
c. Noise level requirement with closed windows. Mechanical ventilation or other measures of natural ventilation shall be provided pursuant to UBC requirements.
d. Multifamily developments with private balconies that would not meet the 65 CNEL standard are required to provide occupancy notices to future tenants regarding potential noise impacts.

GOAL NOI-2: Prevent the exposure of residents and employees of South San Francisco unacceptable vibration levels.

Policy NOI-2.1: Require vibration analysis for sensitive receptors. A vibration analysis shall be prepared by a qualified acoustical consultant for any construction-related activities, located within 100-feet of residential or other sensitive receptors, that require the use of pile driving or other construction method that has the potential to produce high vibration levels.

Policy NOI-2.2: Require vibration analysis for rail lines. A vibration analysis shall be prepared by a qualified acoustical consultant for new land use development located within 200-feet of existing rail lines.

GOAL NOI-3: Historic structures are not exposed to unacceptable vibration levels.

Policy NOI-3.1: Require vibration analysis for historic structure protection. Prior to issuance of grading permits for any development project that is located within 150 feet of a historic structure and, if construction activities will require either: (1) pile driving within 150 feet; or (2) utilization of mobile construction equipment within 50 feet of the historic structure, the property owner/developer shall retain an acoustical engineer to conduct a vibration analysis for potential impacts from construction-related vibration impacts onto the historic structure. The vibration analysis shall determine the vibration levels created by construction activities at the historic structure, and if necessary, develop mitigation to reduce the vibration levels to within Caltrans threshold of 0.12 inches per second PPV for historic buildings.

South San Francisco Municipal Code

Section 8.32.030 of the South San Francisco Municipal Code sets standards for maximum allowable noise generation as follows:

(a) It is unlawful for any person to operate or cause to be operated any source of sound at any location within the city or allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person, which causes the noise level when measured on any other property to exceed:

(1) The noise level standard for that land use as specified in Table 8.32.030 for a cumulative period of more than thirty minutes in any hour.

(2) The noise level standard plus five dB for a cumulative period of more than fifteen minutes in any hour;

(3) The noise level standard plus ten dB for a cumulative period of more than five minutes in any hour;

(4) The noise level standard plus fifteen dB for a cumulative period of more than one minute in any hour; or

(5) The noise level standard or the maximum measured ambient level, plus twenty dB for any period of time.

(b) If the measured ambient level for any area is higher than the standard set in Table 8.32.030, then the ambient level shall be the base noise level standard for purposes of subsection (a)(1) of this section. In such cases, the noise levels for purposes of subsections (a)(2) through (a)(5) of this section shall be increased in five dB increments above the ambient level.

Table 8.32.030 Noise Level Standards

Land Use Category	Time Period	Noise Level (dB)
R-E, R-1 and R-2 zones or any single-family or duplex residential in a specific plan district	10 p.m.—7 a.m. 7 a.m.—10 p.m.	50 60
R-3 and D-C zones or any multiple-family residential or mixed residential/commercial in any specific plan district	10 p.m.—7 a.m. 7 a.m.—10 p.m.	55 60
C-1, P-C, Gateway and Oyster Point Marina specific plan districts or any commercial use in any specific plan district	10 p.m.—7 a.m. 7 a.m.—10 p.m.	60 65
M-1, P-1	Anytime	70

SOURCE: Adapted from "The Model Community Noise Control Ordinance," Office of Noise Control, California Department of Health.

(c) If the measurement location is on a boundary between two different zones, the noise level standard shall be that applicable to the lower noise zone plus five dB.

(d) Notwithstanding any other provisions of this chapter, no person shall willfully make or continue, or cause to be made or continued, any loud, unnecessary or unusual noise which disturbs the peace or quiet of any neighborhood.

Section 8.32.030 of the South San Francisco Municipal Code states:

It is unlawful for any person to operate or cause to be operated any source of sound, on multifamily residential property or multitenant commercial or industrial property, a noise level more than ten dB above the level allowed by Section 8.32.030 three feet from any wall, floor or ceiling inside any unit on the same property when the windows and doors of the unit are closed, except within the unit in which the noise source or sources is located.

Section 8.32.050 of the South San Francisco Municipal Code sets noise standards for construction noise as follows:

(d) **Construction.** Construction, alteration, repair or landscape maintenance activities which are authorized by a valid city permit shall be allowed on weekdays between the hours of eight a.m. and eight p.m., on Saturdays between the hours of nine a.m. and eight p.m., and on Sundays and holidays between the hours of ten a.m. and six p.m., or at such other hours as may be authorized by the permit, if they meet at least one of the following noise limitations:

(1) No individual piece of equipment shall produce a noise level exceeding ninety dB at a distance of twenty-five feet. If the device is housed within a structure or trailer on the property, the measurement shall be made outside the structure at a distance as close to twenty-five feet from the equipment as possible.

(2) The noise level at any point outside of the property plane of the project shall not exceed ninety dB.

d. City of Brisbane Plans, Ordinances, and Regulations

Brisbane General Plan

The following Community Health and Safety Element policies and programs regarding noise are relevant to Specific Plan development:

Policy 176: Minimize the intrusion of unwarranted and intrusive noise on community life.

Program 176a: Discourage new sources that generate excessive noise.

Policy 179: Require the incorporation, when feasible, of new road or landscaping features that buffer noise impacts on adjacent areas.

Policy 180: Establish and enforce truck routes and times of operation for haul routes to minimize impacts on residential areas.

Policy 182: Support efforts to reduce vehicle trips and keep smooth traffic flow to the extent that the number of trips and stop-and-start traffic contribute to traffic noise.

Policy 183: Coordinate land uses and construction conditions to minimize noise impacts of the Caltrain corridor and major highway arterials on adjacent land uses.

Policy 184: In conjunction with development applications and other land use decisions, consider the potential for noise generation from, as well as noise impacts on, the project or area.

Program 184a: Use the State Guidelines for land use compatibility to determine noise impacted uses.

Program 184b: Require acoustical studies for development applications in areas identified as noise impacted and potential noise generators.

Program 184c: For such projects, noise attenuation or a mitigation program to be submitted as part of the project design.

Program 184a requires using the State of California's Land Use Compatibility Guidelines to determine noise-affected uses. The acceptable noise exposures for land use compatibility published by the State of California were presented in **Table 4.12-11**.

The State of California's Land Use Compatibility Guidelines are used for determining the compatibility of various land uses with different noise environments. Noise levels in **Table 4.12-11** are expressed in terms of DNL, which applies a correction or "penalty" to noise generated during the more sensitive nighttime hours. CNEL measurements are a weighted average of sound levels gathered throughout a 24-hour period, providing a measure of ambient noise. Different weighting factors apply to day, evening, and nighttime periods. This recognizes that community members are most sensitive to noise in late night hours and are more sensitive during evening hours than in daytime hours.

Policy 189: In the Municipal Code, continue to restrict noise-producing construction activities to daytime hours of operation.

Under the State of California guidelines identified in **Table 4.12-11**, the acceptable noise level for residential, hotel, and motel uses is generally 60 to 65 dBA or less, while conditionally acceptable noise levels range from 60 dBA to 70 dBA (may require insulation, etc.). Noise levels over 70 dBA are, in general, unacceptable for these sensitive land uses.

Noise environments of up to 70 dBA are generally considered acceptable for office, professional, and business commercial land uses, while conditionally acceptable noise levels[262] range from 67.5 dBA to 77.5 dBA. Noise levels over 75 dBA are, in general, normally unacceptable for these land uses.

Policy 189: In the Municipal Code, continue to restrict noise-producing construction activities to daytime hours of operation.

Brisbane Noise Ordinance

The City of Brisbane also regulates community noise levels through enforcement of Chapter 8.28 of the Brisbane Municipal Code. Noise standards are established by land use and are presented in **Table 4.12-15**.

Table 4.12-15: Brisbane Municipal Code Chapter 8.28 Noise Standards

Land Use Type	Duration of Noise in Minutes within an Hour	Noise Standard as Maximum Allowable dBA above Ambient
Single Family Residential	At any time	30
	3 minutes	20
	10 minutes	10
Multi-Family Residential	Any time	30
	3 minutes	20
	10 minutes	10
Commercial / Industrial	Any time	30
	3 minutes	20
	10 minutes	10

SOURCE: City of Brisbane, 2023.

Noise from construction activities is restricted by Section 8.28.060 of the Brisbane Municipal Code. This section limits construction hours to between 7:00 a.m. and 7:00 p.m. on weekdays and 9:00 a.m. and 7:00 p.m. on weekends and holidays. Further, this section requires construction activities to meet at least one of the following standards:

A. No individual piece of equipment shall produce a noise level exceeding 83 dBA at a distance 25 feet from the source thereof. If the device or other source is housed within a structure on the property, the measurement shall be made outside the structure, but at a distance as close to the equipment or source as possible.

B. The noise level at any point outside of the property plane of the project shall not exceed 86 dBA.

[262] "Conditionally acceptable" noise levels are those where noise insulation or building design features can be included in the design to reach acceptable levels. In many cases, conventional construction, but with closed windows and fresh air supply systems or air conditioning, will suffice.

Approval of an exception permit pursuant to Brisbane Municipal Code Section 8.280.080 would be required for construction noise levels greater than 83 dBA at 25 feet from the source.

4.12.4 SIGNIFICANCE CRITERIA

As discussed in Section 4.1.3, the following criteria were used to determine the significance of noise and vibration impacts:

Threshold NOI-1: The Baylands Specific Plan would cause a significant impact if any of the following would occur:

- **Construction Hours**
  - **Baylands-related construction activities within the City of Brisbane would occur outside of the construction hours specified in Brisbane Municipal Code Section 8.28.060; or**
  - **Baylands-related construction activities conducted in a jurisdiction other than the City of Brisbane would occur either (1) outside of the construction hours adopted by the jurisdiction within which construction takes place or (2) outside of the construction hours set forth in Brisbane Municipal Code Chapter 8.28, whichever standards are more stringent.**
- **Construction Noise**
  - **Baylands-related construction activities would exceed the noise standards set forth in Brisbane Municipal Code Chapter 8.28.060 within the City of Brisbane; or**
  - **Baylands-related construction activities generating noise outside of the City of Brisbane would exceed either (1) any construction noise standard adopted by the jurisdiction within which such noise would occur or (2) the noise standards set forth in Brisbane Municipal Code Chapter 8.28, whichever is more stringent.**
  - **Baylands-related construction activities would increase ambient noise levels by 10 dBA or more at the nearest sensitive receptor averaged over the construction hours specified in Brisbane Municipal Code Section 8.28.060.**

Threshold NOI-2: **The Baylands Specific Plan would cause a significant impact during operations if a stationary source would generate noise in excess of 5 dBA[263] L_{eq} above the ambient at any sensitive receptor or in excess of any of the standards of Brisbane Municipal Code Section 8.28.030.**

Threshold NOI-3: **The Baylands Specific Plan would cause a significant impact during operations following construction if Specific Plan-generated traffic would cause ambient noise increases at one or more sensitive receptors in excess of the increases indicated in the table below.**

Ambient Noise Level without Project (DNL)	Project Increases Ambient Noise Levels by:
<60 dBA	+ 5.0 dBA or more
60–65 dBA	+ 3.0 dBA or more
>65 dBA	+ 1.5 dBA or more

Threshold NOI-4: **The Baylands Specific Plan would cause a significant impact if it would exacerbate land use / noise incompatibilities by exposing people living or staying at a hotel within the Baylands to noise levels in excess of:**

- **65 DNL generated by railroad or freeway operations; or**
- **A 65 CNEL noise contour generated by aircraft activity.**
- **An interior noise level in excess of Title 24 standard of 45 DNL.**

Threshold NOI-5: **The Baylands Specific Plan would cause a significant impact if any of the following would occur:**

- **Human Annoyance (Construction or Operation)**
  - **A vibration level of 72 VdB (vibration decibels) would be generated for more than 70 vibration events on a daily basis by construction or operational activities at an occupied residential use; or**
  - **A vibration level of 80 VdB (vibration decibels) would be generated by construction activities at an occupied non-residential use.**

[263] As stated in the Physical Environmental Setting section, a change in noise levels of 5 dB is considered to be a readily perceivable difference.

- **Damage to Historic Structures**
  - **Construction or operational activities would generate in excess of 0.25 inches per second [in/sec] peak particle velocity [PPV] at a historic structure.**
- **Damage to Modern Structures**
  - **Construction or operational activities would generate in excess of 0.5 inches per second [in/sec] peak particle velocity [PPV] at a modern structure.**
- **Damage to Underground Utilities**
  - **Construction activities would generate in excess of the Association of State Highway and Transportation Officials (AASHTO) guidelines for underground utility criteria, including 4.0 in/sec for utility lines and 10.0 in/sec for cables and underground structures.**

Threshold NOI-6: The Baylands Specific Plan would cause a significant impact if it would exacerbate human annoyance due to vibration levels by placing residential buildings or hotels in areas experiencing either:

- **A vibration level of 80 vibration decibels (VdB) or more on a daily basis if fewer than 30 events per day; or**
- **A vibration level of 72 VdB from activities that generate more than 70 vibration events on a daily basis.**

4.12.5 PROJECT IMPACTS AND MITIGATION MEASURES

a. Impact NOI-1: Temporary Increase in Ambient Noise Levels during Construction

Methodology for Determining Significance

Threshold NOI-1 addresses whether Baylands construction would generate noise in excess of established construction and mobile source noise standards. The Impact NOI-1 analysis focuses on specific Baylands construction activities that would exceed these standards.

Construction noise levels were estimated for standard construction equipment and for high-impact construction equipment with consideration of the duration and intensity of construction activities. The FHWA Roadway Construction Noise Model (RCNM) was used to calculate construction noise (FHWA 2006). The RCNM is used as the FHWA's national standard for predicting construction noise. RCNM analysis includes the calculation of noise levels (L_{max} and L_{eq}) at incremental distances for a variety of construction equipment. Inputs for the model

include acoustical use factors and L_{max} reference noise levels and estimated distances to the receptor location analyzed.

FTA methodology for general assessment of construction noise was used to determine noise levels that would result from Baylands construction activities. The FTA methodology entails a process for calculating the hourly dBA L_{eq} and determining resulting noise levels for the two noisiest pieces of equipment expected to be used in each stage of construction considering:

- The reference noise emissions level at 50 feet for equipment to be used for each stage of construction;
- The usage factor for each piece of equipment; and
- The distance between the construction centerline and receptors.

Brisbane Municipal Code Section 8.28.060, Construction Activities, sets forth specific standards for construction hours, noise levels from individual pieces of equipment, and allowable noise levels at the property lines of a construction project. Because these standards were designed to prevent substantial nuisance noise during construction activities, exceedances of these standards indicate a significant impact, and therefore, the standards are used to determine whether Baylands construction activities would have significant impacts within the City of Brisbane.

Where Baylands-related construction activities generate noise in jurisdictions other than the City of Brisbane, such jurisdictions may also have adopted noise standards designed to prevent substantial nuisance noise during construction activities, and exceedances of these standards would indicate a significant impact within those jurisdictions. The standards set forth in Section 2907(a) of the San Francisco Noise Ordinance were used to determine the significance of Baylands construction noise on receptors in San Francisco. Similarly, the noise standards set forth in Daly City Municipal Code Section 17.39.100 were used to determine the significance of Baylands construction noise on receptors in Daly City.

In addition to the assessment of construction noise relative to noise standards adopted by Brisbane, San Francisco, Daly City, and South San Francisco, Impact NOI-1 also examines whether an increase of 10 dBA or more over existing noise levels at sensitive-receptor locations, which would be perceived as a doubling of loudness, would occur.

Local jurisdictions do not have the authority to regulate transportation noise through their County or municipal codes.[264] Therefore, transportation noise increases are assessed in Impact NOI-3 separate from construction or operational noise which are generally assessed relative to standards in the local municipal code. The measures of a substantial increase in transportation noise exposure as recommended by the Federal Interagency Committee on Noise are used in

[264] Local jurisdictions can establish noise exposure standards for proposed new uses relative to transportation in their General Plans. Additionally, some local jurisdictions can adopt General Plan Policies that establish CEQA criteria for transportation noise. However, this later condition is not the case for Brisbane or San Francisco.

the analysis and are presented in Table 12 of Appendix J, *Baylands Noise and Vibration Technical Report*. A significant noise impact would occur if Baylands development and traffic would cause ambient noise levels greater than 3 dBA above levels existing without the project for areas already impacted by noise and a 5 dBA increase at receptors where the noise compatibility standard is being met along the portions of roadways in the jurisdiction of either Brisbane or San Francisco. These are the criteria applied in the assessment of roadway vehicle noise on local roadways as identified for operational noise in Threshold NOI-3, above.

Impact Assessment

As detailed in Section 3.3.4, *Phasing of Baylands Development*, grading and construction of the buildings, street network, and infrastructure in the Specific Plan area would be sequenced over two primary phases.

Table 4.12-16 presents the noise levels generated by common pieces of construction equipment and by pile driving and compaction activities that would be required for Specific Plan development.

Table 4.12-16: Typical Maximum Noise Levels from Construction Equipment (Reference Levels)

Construction Equipment	Reference Noise Level (dBA, L_{max} at 50 feet)	Noise Level (dBA, L_{max} at 25 feet)
Backhoe	78	84
Excavator	81	87
Compactor	83	89
Scraper	84	90
Air Compressor	78	84
Dozer	82	88
Crane	81	87
Grader	85	91
Paver	77	83
Roller	80	86
Front End Loader	79	85
Trucks	76	82
Concrete Crusher	79	85
Impact and Vibratory Pile Driver	101	107

SOURCE: FHWA, 2006.

NOTE: These are maximum field measured values at 50 feet as reported from multiple samples. Concrete crusher processing noise level based on data from H.M. Pitt Labs, 2006.

As can be seen from **Table 4.12-16**, many pieces of standard construction equipment generate a noise level exceeding 83 dBA at a distance of 25 feet. Therefore, compliance of Baylands development with Brisbane Municipal Code Section 8.28.060 (A) is incumbent upon ensuring that construction noise does not exceed 86 dBA outside the property plane. The following

analysis assesses potential construction noise impacts relative to the 86 dBA property plane limitation and also addresses whether construction activities would result in an increase in ambient noise levels greater than 10 dBA.

Nighttime Construction

All grading and construction permitted by the Specific Plan would be required to comply with General Plan Policy 189 and the Brisbane Municipal Code, including the following standards:

- Hours of construction activities will be limited to the hours of:
    - Monday through Friday – 7:00 a.m. to 7:00 p.m.
    - Weekends and Holidays – 9:00 a.m. to 7:00 p.m.

However, some construction activities, such as concrete pours or other work to maintain safety or avoid traffic impacts, may require nighttime activity that could conflict with the City of Brisbane's ordinance limiting the hours and days allowed for construction work. Such nighttime activities could result in temporary noise level increases exceeding the quieter nighttime ambient noise levels by more than 10 dBA, particularly for proposed on-site receptors occupied while construction of later phases is still ongoing.

Brisbane Municipal Code Section 8.28.080 provides for limited exceptions to the standards of Section 8.28, in general. Specifically, if an applicant can demonstrate to the satisfaction of the community development director immediate compliance with the requirements of this chapter would be impractical or unreasonable, the community development director may issue a permit to allow exception from any or all of the provisions contained in Chapter 28, with appropriate conditions to minimize the public detriment caused by such exceptions.

Such construction activities would be subject to review, permitting, and approval by the Director of the Community Development Department or the Director's designee for review and approval before the issuance of any building permit.

Initial Demolition Activities within the Western Portion of the Baylands

Initial preparation of the Baylands for development would include the demolition and deconstruction of non-historic buildings, site structures (retaining walls, utility structures), streets and pavement, existing utilities, and landscape elements that are incompatible with the proposed land development program and design within the western portion of the Baylands. The historic Roundhouse structure would be dismantled for future restoration following site grading. Non-historic buildings and structures to be removed are primarily of wood, masonry, and concrete construction and were formerly used for administration, railyard maintenance, and industrial operations. Within the western portion of the Baylands, these primarily consist of the industrial buildings along Bayshore Boulevard and Industrial Way. The nearest noise-sensitive receptors to buildings that would be demolished include residences on Linda Vista

Drive in Daly City, approximately 950 feet away, and residences on Cliff Swallow Court in Brisbane, approximately 1,000 feet away.

Equipment involved with demolition of the existing structures within the western portion of the Baylands would include excavators, backhoes, loaders, tractors, and haul trucks. Noise levels from demolition activities at the nearest sensitive receptors are presented in **Table 4.12-17**. Noise levels from demolition activities would be less than 86 dBA, would increase by 4.4 dBA at the nearest receptor, and would therefore be below this level at other receptors.

Table 4.12-17: Daytime Noise from Demolition Activities within the Western Portion of the Baylands

Representative Sensitive Receptor	Existing Daytime Noise Level (dBA, L_{eq})[a]	Loudest Two Noise Sources	Reference Noise Level (dBA)[b]	Distance to Receptor (feet)	Usage Factor	Adjusted L_{eq} Level (dBA, L_{eq})[c]	Resultant Noise Level (dBA, L_{eq})[d]	Increase over Existing Noise Level (dBA)
Linda Vista Drive, Daly City	—	Dozer	81.7	950	40%	52.1	—	NA
		Tractor	84.0	950	40%	54.4	—	NA
	54	Combined Total	84.0	950	40%	56.4	58.4	+4.4
Cliff Swallow Court in Brisbane	—	Dozer	81.7	1,000	40%	51.7	—	NA
		Tractor	84.0	1,000	40%	54.0	—	NA
	60	Combined Total	84.0	1,000	40%	56.0	61.5	+1.5

SOURCE: Environmental Science Associates, 2025.

NOTES:

NA = not applicable

a. Existing noise level based on long- or short-term noise monitoring.
b. Reference value for equipment at 50 feet is an L_{max} as published by the FHWA.
c. Noise level is adjusted for number of equipment, distance to receptors, and usage factor.
d. Resultant noise level is the logarithmic sum of the existing noise level and the adjusted noise level.

Site Grading

Loading and Transport of Soils from the Former Landfill for Grading and Compaction to Create Building Pads within the Western Portion of the Baylands

Once initial demolition activities within the western portion of the Baylands are complete, construction activities would, for the approximately 2.5 million cubic yards of soil within the former landfill, consist of simultaneously loading the soil onto trucks; transporting these soils to the western portion of the site; and then unloading, grading, and compacting soils to create building pads within the western portion of the Baylands. Once the southernmost portion of the former landfill area is cleared of overlying soils and the underlying landfill area has undergone Title 27 final landfill closure subject to the regulatory authority and oversight of the Regional Water Quality Control Board, construction of the 55-acre solar farm would commence while the remaining soils to the north are moved, transported, graded, and compacted within the western portion of the Baylands. Each of the activities subject to City of Brisbane regulatory authority is

assessed individually below, followed by an assessment of the aggregate construction noise from these activities occurring simultaneously.[265]

SOIL LOADING

The movement of 2.5 million cubic yards of soil from atop the former landfill area in the eastern portion of the Baylands to be placed as engineered fill within the area west of the Caltrain right-of-way would involve the use of loaders to fill haul trucks. Approximately 10 loaders would work on a daily basis to fill haul trucks with soil stockpiled within the former landfill footprint area for transport to the western portion of the Baylands to establish building pads, starting from south to north.

Although loaders filling haul trucks in the eastern portion of the Baylands would generate noise, loading activities in the northern portion of the former landfill area would occur approximately 1,500 feet from the nearest receptors (ST-1) in the Little Hollywood neighborhood of San Francisco, while loading activities in the southern portion of the former landfill area would occur 1,800 feet from the nearest receptors on San Francisco Avenue in Brisbane (LT-7).

Construction noise levels were calculated for the loading of haul trucks in the eastern portion of the Baylands. The general assessment methodology for assessing construction noise impacts developed by FTA assumes simultaneous operation of the two noisiest pieces of equipment, and this assumption is applied for subsequent construction phases. However, for this analysis of soil loading activities, it is assumed that 10 loaders would be simultaneously engaged in loading trucks, as this effort to transport soil within the construction schedule would require such a scenario. The resulting noise levels at the nearest sensitive receptors are presented in **Table 4.12-18**.

As each truck is loaded within the eastern portion of the Baylands, soil would be transported to the western portion of the site where truckloads of soil would be unloaded, graded, and compacted to create building pads.

SOIL MOVEMENT AND PLACEMENT

As soil is transported to and unloaded within the western portion of the Baylands, rough grading would be undertaken. Equipment used for this rough grading would likely include loaders, graders, and compaction rollers. Noise levels from grading activities would increase by 7.0 dBA at the nearest noise-sensitive receptor and would be below this level at other receptors.

[265] Because Title 27 landfill closure is not subject to the regulatory authority of the City of Brisbane and was approved by the Regional Water Quality Control Board prior to release of this Draft EIR, noise impacts associated with placement of the required landfill cap are not analyzed as part of the Baylands Specific Plan project.

Table 4.12-18: Daytime Noise from Soil Loading within the Former Landfill Area by 10 Loaders

Representative Sensitive Receptor	Existing Daytime Noise Level (dBA, L_{eq})[a]	Equipment: 10 Loaders	Reference Noise Level (dBA)[b]	Distance to Receptor (feet)	Usage Factor	Adjusted L_{eq} Level (dBA, L_{eq})[c]	Resultant Noise Level[d]	Increase over Existing Noise Level (dBA)
Lathrop Avenue, San Francisco	54	Combined Total	79.1	1,500	40%	55.6	57.9	+3.9
San Francisco Avenue, Brisbane	61	Combined Total	79.1	1,800	40%	54.0	61.8	+ 0.8

SOURCE: Environmental Science Associates, 2025.

NOTES:

a. Existing noise level based on long- or short-term noise monitoring.
b. Reference value is an L_{max} for a single loader.
c. Noise level is adjusted for number of equipment, distance to receptors, and usage factor.
d. Resultant noise level is the logarithmic sum of the existing noise level and the adjusted noise level.

The noise impacts identified above assume that placement of soil and grading for the approach to the Geneva Avenue bridge over the Caltrain right-of-way would be undertaken concurrent with grading of adjacent lands north and south of the Geneva Avenue extension. Should residential structures adjacent to the bridge approach west of the Caltrain right-of-way be completed and occupied prior to placement and grading of the bridge approach, noise levels during that activity would approach the reference noise levels in **Table 4.12-16**. Should grading of the bridge approach on the east side of the Caltrain right-of-way occur after completion and occupancy of residential structures adjacent to Geneva Avenue west of the Caltrain right-of-way, noise levels during that activity would be similar to those identified in **Table 4.12-19** for Desmond Street in San Francisco.

Table 4.12-19: Daytime Noise from Grading Activities Associated with Grading Activities for Phase 1 Development

Representative Receptor	Existing Daytime Noise Level (dBA, L_{eq})[a]	Loudest Two Noise Sources	Reference Noise Level (dBA)[b]	Distance to Receptor (feet)	Usage Factor	Adjusted L_{eq} Level (dBA, L_{eq})[c]	Resultant Noise Level (dBA, L_{eq})[d]	Increase over Existing Noise Level (dBA)
Desmond Street, San Francisco	—	Compactor	83.2	470	20%	56.8	—	NA
	—	Excavator	80.7	470	40%	57.3	—	NA
	54	Combined Total	83.2	470	20/40%	60.0	61.0	+7
Cliff Swallow Court in Brisbane	—	Compactor	83.2	1,000	20%	50.2	—	NA
	—	Excavator	80.7	1,000	40%	50.7	—	NA
	60	Combined Total	83.2	1,000	20/40%	53.5	60.9	+0.9

SOURCE: Environmental Science Associates, 2025.

NOTES:

a. Existing noise level based on long- or short-term noise monitoring.
b. Reference value for equipment at 50 feet is an L_{max} as published by FHWA.
c. Noise level is adjusted for number of equipment, distance to receptors, and usage factor.
d. Resultant noise level is the logarithmic sum of the existing noise level and the adjusted noise level.

Soil materials to be moved from the eastern portion of the Baylands to the western portion would be hauled by trucks following a 3.8-mile route using a combination of off-road haul routes and public streets indicated in **Figure 3-54** over an approximately 34-month period. During peak times for site grading, approximately 640 daily round trip truck hauls would occur, including approximately 160 round trip truck hauls in the AM peak hour and 160 round trip truck hauls in the PM peak hour.

Transport of soil to the southwesterly portion of the Baylands would use Tunnel Avenue south to the Old County Road intersection where trucks would briefly proceed north on Bayshore Boulevard before accessing an internal roadway within the Baylands for unloading. This southerly route would be approximately 500 feet from existing residences on San Francisco Avenue in Brisbane and 1,200 feet from existing residences on Cliff Swallow Court in Brisbane.

Transport of soil to the northwesterly portion of the Baylands would use Tunnel Avenue north to Blanken Avenue and then proceed south on Bayshore Boulevard before accessing an internal roadway within the Baylands for unloading. This northerly route would be within 20 feet of existing residences on Blanken Avenue between Tunnel Avenue and Bayshore Boulevard and within 50 feet of residences on the 2400 block of Bayshore Boulevard.

Table 4.12-20 presents the results of the roadway hourly average noise modeling for construction haul trucks.

As shown in this table, roadway noise levels would increase by more than 3 dBA along the following roadway segments:

- Tunnel Avenue between Beatty Avenue and Blanken Avenue;
- Blanken Avenue between Tunnel Avenue and Bayshore Boulevard;
- Bayshore Boulevard between Tunnel Avenue and Southern Access Road; and
- Bayshore Boulevard between Blanken Avenue and Northern Access Road.

SOIL STABILIZATION

Soil stabilization within the Baylands would involve consecutive weeks of deep dynamic compaction. Deep dynamic compaction involves repeatedly dropping a large weight onto the soil using a crane. The weight is repeatedly dropped in a specific grid pattern at a defined drop height. At impact with the ground, the energy is transmitted at depth to densify loose material.

Table 4.12-20: Hourly average Daytime Noise Levels from Haul Truck Noise Increases along Soil Haul Routes (dBA, L_{eq})

Roadway Segment	Nearest Sensitive Receptor Location	Distance from Roadway Centerline to nearest Receptor (feet)	(A) Existing Modeled or Monitored[a] Noise level	Applicable Significance Threshold[b]	(B) Existing plus Haul Trucks	(B-A) Difference between Existing plus Haul Trucks and Existing	Significant Increase?
Bayshore Boulevard between Tunnel Avenue and Southern Access Road	**San Francisco Avenue, Brisbane**	**375**	**64.7**	**>3 dBA increase in an area >60 dBA L_{dn}**	**70.1**	**5.4**	**Yes**
Southern Access Road between Bayshore Boulevard and Icehouse District Deposition Area	Cliff Swallow Court in Brisbane	1,200	62[a]	>3 dBA increase in an area >60 dBA L_{dn}	62	<1	No
Tunnel Avenue between Beatty Avenue and Blanken Avenue	**Tunnel Avenue Residences, San Francisco**	**22**	**65.9**	**>3 dBA increase in an area >60 dBA L_{dn}**	**78.0**	**12.2**	**Yes**
Blanken Avenue between Tunnel Avenue and Bayshore Boulevard	**Blanken Avenue Residences, San Francisco**	**22**	**67.6**	**>3 dBA increase in an area >60 dBA L_{dn}**	**78.2**	**10.5**	**Yes**
Bayshore Boulevard between Blanken Avenue and Northern Access Road	**Bayshore Boulevard Residences, San Francisco**	**50**	**68.5**	**>3 dBA increase in an area >60 dBA L_{dn}**	**75.4**	**6.9**	**Yes**
Northern Access Road between Bayshore Boulevard and Bayshore District Deposition Area	Desmond Street Residences, San Francisco	1,100	59.7[a]	>3 dBA increase in an area >60 dBA L_{dn}	62.2	2.5	No

SOURCE: Environmental Science Associates noise survey, 2019

NOTES:

a. Monitored noise values are used for the nearest sensitive receptors that are not located along haul routes. All other existing values are modeled values for the roadway.
b. See Section 4.12-4 for the full text of Threshold NOI-3. Further detail is provided in Appendix J of this EIR, *Baylands Noise and Vibration Technical Report*.

While deep dynamic compaction is considered an impact-type activity, the impact from weight drops results in noticeable levels of vibration but a much lesser degree of noise. The weights used in deep dynamic compaction generally land on soils that absorb the impact and sound of the weight drop (i.e., impact noise from dropping of a weight is a low-level "thud" sound). Steady noise from deep dynamic compaction is emitted at relatively low levels from mobile cranes that move and drop weights. Noise levels generated by deep dynamic compaction are identified in **Table 4.12-21**.[266] For deep dynamic compaction activities, the closest off-site receptors on Desmond Street in San Francisco would be approximately 450 feet away. Noise levels from deep dynamic compaction activities would increase daytime noise levels by 4.2 dBA at the nearest off-site sensitive receptor. On-site sensitive receptors would not be present while deep dynamic compaction is occurring.

Solar Farm Construction

A solar farm would be constructed within the Baylands on a 55-acre site south of Visitacion Creek between Tunnel Avenue and US 101, approximately 1,800 feet from the nearest off-site receptor on San Francisco Avenue in Brisbane. Solar energy generation facilities would generally require standard construction methods generally organized into three broad work stages:

1. Mobilization, site preparation, fencing, laydown, and trenching.
2. Cable install, trench backfill, pile driving and racking install, inverter install, and module install.
3. Inverter, pile driving and racking installation, module installation, commissioning, and testing.

Installing solar panels with single axis tracking systems typically requires driving steel piers about 6 to 10 feet into the ground. Because of the limited depth, pile driving intensity for solar panels would be far less than that associated with building foundations. Noise levels from solar panel pile driving activities at the nearest sensitive receptors are presented in **Table 4.12-22**. Noise levels from solar panel pier installation activities would increase daytime noise by 4.2 dBA at the nearest sensitive receptor and would be below this level at other receptors.

[266] Vibration emissions from deep dynamic compaction are evaluated in Impact NOI-3, below (see **Table 4.12-39**).

Table 4.12-21: Daytime Noise from Deep Dynamic Compaction

Representative Sensitive Receptor	Existing Daytime Noise Level (dBA, L_{eq})[a]	Loudest Two Noise Sources	Reference Noise Level (dBA)[b]	Distance to Receptor (feet)	Usage Factor	Adjusted L_{eq} Level (dBA, L_{eq})[c]	Resultant Noise Level (dBA, L_{eq})[d]	Increase over Existing Noise Level (dBA)
Desmond Street, San Francisco	—	Crane	61.1	470	16%	53.1	—	NA
	—	Crane	61.1	470	16%	53.1	—	NA
	54	Combined Total	61.1	470	16%	56.1	58.2	+4.2

SOURCE: Environmental Science Associates, 2025.

ABBREVIATION: NA = not applicable

NOTES:

a. Existing noise level based on long- or short-term noise monitoring.
b. Reference value for equipment is an L_{max} at 50 feet as published by the FHWA.
c. Noise level is adjusted for number of equipment, distance to receptors, and usage factor.
d. Resultant noise level is the logarithmic sum of the existing noise level and the adjusted noise level.

Table 4.12-22: Daytime Noise from Solar Farm Construction

Representative Sensitive Receptor	Existing Daytime Noise Level (dBA, L_{eq})[a]	Loudest Two Noise Sources	Reference Noise Level (dBA)[b]	Distance to Receptor (feet)	Usage Factor	Adjusted L_{eq} Level (dBA, L_{eq})[c]	Resultant Noise Level (dBA, L_{eq})[d]	Increase over Existing Noise Level (dBA)
San Francisco Avenue, Brisbane	—	Crane	80.6	1,800	16%	41.5	—	NA
	—	Pile Driving	101.3	1,800	20%	63.2	—	NA
	61	Combined Total	101.3	1,800	16/20%	63.2	65.2	+4.2

SOURCE: Environmental Science Associates, 2025.

ABBREVIATION: NA = not applicable

NOTES:

a. Existing noise level based on long- or short-term noise monitoring.
b. Reference value is for equipment at 50 feet as published by the FHWA.
c. Noise level is adjusted for number of equipment, distance to receptors, and usage factor.
d. Resultant noise level is the logarithmic sum of the existing noise level and the adjusted noise level.

Aggregate Noise Impacts from Simultaneous Soil Loading, Unloading, Grading, and Compaction Activities, and Solar Farm Construction

Predicted noise levels from soil loading, grading, and compaction and construction of the solar farm are logarithmically summed and compared to existing ambient noise levels at the nearest sensitive receptors in **Table 4.12-23**.

Table 4.12-23: Aggregate Daytime Construction Noise Levels for Grading Activities in the Western Portion of the Baylands and Concurrent Solar Farm Construction in the Eastern Portion

Representative Sensitive Receptor	Existing Daytime Noise Level (dBA, L_{eq})[a]	Noise Levels Generated (in dBA)				Combined Noise Level (L_{eq})[b]	Increase over Existing (dBA)
		Loading	Grading	Deep Dynamic Compaction	Solar Farm Construction		
Desmond St., San Francisco	54	49.0	60.0	56.1	54.0	63.0	+9.0
Cliff Swallow Court, Brisbane	60	50.8	53.5	47.3	60.0	63.8	+3.8
Wheeler Ave., San Francisco	54	55.6	52.8	50.2	54.0	60.6	+6.6
San Francisco Ave., Brisbane	61	54.0	50.6	39.5	63.2	65.7	+4.7

SOURCE: Environmental Science Associates, 2025.

NOTES:

a. Existing daytime noise level based on long- or short-term noise monitoring.
b. Combined noise level is the logarithmic sum of the existing noise level and the contributions from each simultaneous soil work activity.

Installation of Pile Foundations within the Western Portion of the Baylands

After grading and compaction of the western portion of the Baylands, excavation and foundation work for individual structures would begin. In general, the Geneva Avenue bridge and buildings greater than 50 feet in height (typically 5 stories or more) would not likely be able to use flat slab foundations and would therefore require pile foundations. Installation of pile foundations at one or more construction sites could thus occur intermittently throughout the projected 8 years of building construction following grading.

Pile Foundations

Where soil conditions preclude resting the weight of a building on a flat concrete slab constructed on the ground surface, piles consisting of columns of reinforced concrete, timber, or steel-concrete composite materials are used. With a pile foundation, the base of a building rests on a cap attached to the top of piles such that the weight of the building is transferred through the piles to a hard bedrock or a compact soil stratum below the ground surface.

Numerous types of pile foundation installation techniques are available, the most common of which are:

- Drop hammer (impact) pile driving in which a massive weight (typically 1,200 to 3,000 pounds) is raised to a suitable height and dropped onto a pile, driving it into the ground until the tip of the pile rests on a hard layer of bedrock or soil.
- Vibratory pile driving using a spinning counterweight attached to a pile that creates a vibration causing the pile to cut into the soil below.
- Boring by mechanical auger of holes into which piles are cast in place.

Impact pile driving would be the loudest construction activity occurring within the Baylands. The reference noise level for impact pile driving is 101 dBA, L_{max} at a distance of 50 feet, which equates to a noise level of 107 dBA L_{max} at a distance of 25 feet. The resulting noise levels at the nearest existing sensitive receptors are presented in **Table 4.12-24**.

Table 4.12-24: Daytime Noise from Pile Driving Activities within the Western Portion of the Baylands

Representative Sensitive Receptor	Existing Daytime Noise Level (dBA, L_{eq})[a]	Loudest Two Noise Sources	Reference Noise Level (dBA)[b]	Distance to Receptor (feet)	Usage Factor	Adjusted L_{eq} Level (dBA, L_{eq})[c]	Resultant Noise Level (dBA, L_{eq})[d]	Increase over Existing Noise Level (dBA)
Desmond Street, San Francisco	—	Crane	80.6	470	16%	53.1	—	NA
	—	Pile Driving	101.3	470	20%	74.8	—	NA
	54	Combined Total	101.3	470	16/20%	74.8	74.8	+21
Cliff Swallow Court, Brisbane	60	Combined Total	101.3	1,200	16/20%	66.7	67.5	+7.5
Wheeler Avenue, San Francisco	54	Combined Total	101.3	975	16/20%	68.5	68.7	+15
San Francisco Avenue, Brisbane	61	Combined Total	101.3	3,800	16/20%	56.7	62.4	+1.4
Baylands Housing	**51**	**Combined Total**	**101.3**	**50**	**16/20%**	**94.3**	**94.3**	**+43**

SOURCE: Environmental Science Associates, 2025.

ABBREVIATION: NA = not applicable

NOTES:

a. Existing noise level based on long- or short-term noise monitoring.
b. Reference value is for equipment at 50 feet as published by the FHWA.
c. Noise level is adjusted for number of equipment, distance to receptors, and usage factor.
d. Resultant noise level is the logarithmic sum of the existing noise level and the adjusted noise level.

Noise from pile driving activities would substantially increase existing noise levels at both off-site receptors and future on-site receptors. Off-site receptors as far as 1,500 feet or more away could experience significant noise increases of 10 dBA or more over existing daytime noise levels, potentially affecting dozens of receptors in Brisbane, Daly City, and San Francisco during activities for the westernmost portion of the Icehouse District and northern portions of the Bayshore District. Additionally, if pile driving is conducted while new housing is occupied, uses within 120 feet would experience noise levels exceeding the 86 dBA criterion of the Brisbane Municipal Code, and uses within 1,500 feet may experience noise levels exceeding 10 dBA over existing daytime ambient levels.

Installing cast-in-place concrete piles would reduce noise (as noise from auger drilling is 17 dBA less than an impact pile driver), but only where geologic conditions can support this option. Other "quiet" pile-installation technology such as pre-drilling of piles and the use of more than one pile driver to shorten the total pile installation duration are other techniques to reduce noise. More recently, newer technologies such as micro pile installation for foundations or use of the Giken Silent Pile Driver are becoming common. It has been demonstrated that using such equipment can generate reduced noise levels of approximately 64 dBA at 16 meters.

Building Construction within the Western Portion of the Baylands

Once the foundation is in place for each given structure, vertical construction would begin, which would involve a standard set of construction equipment. Noise levels from building construction activities at the nearest sensitive receptors are presented in **Table 4.12-25**. Noise levels from building construction would increase by 9.8 dBA at the nearest off-site receptor; at adjacent on-site receptors, however, noise from building construction activities would be more than 30 dBA over existing levels.[267]

Table 4.12-25: Daytime Noise from Vertical Building Construction within the Western Portion of the Baylands

Representative Sensitive Receptor	Existing Daytime Noise Level (dBA, L_{eq})[a]	Loudest Two Noise Sources	Reference Noise Level (dBA)[b]	Distance to Receptor (feet)	Usage Factor	Adjusted L_{eq} Level (dBA, L_{eq})[c]	Resultant Noise Level (dBA, L_{eq})[d]	Increase over Existing Noise Level (dBA)
Desmond Street, San Francisco	—	Forklift	83.4	470	40%	60.0	—	NA
	—	Tractor	84.0	470	40%	60.6	—	NA
	54	Combined Total	84.0	470	40%	63.3	63.8	+9.8
Baylands Housing	—	Forklift	83.4	50	40%	79.4	—	NA
	—	Tractor	84.0	50	40%	80.0	—	NA
	51	**Combined Total**	**84.0**	**50**	**40%**	**82.7**	**82.7**	**+32**

SOURCE: Environmental Science Associates, 2025.

ABBREVIATION: NA = not applicable

NOTES:

a. Existing noise level based on long- or short-term noise monitoring.
B. Reference value is for equipment at 50 feet as published by the FHWA.
c. Noise level is adjusted for number of equipment, distance to receptors, and usage factor.
d. Resultant noise level is the logarithmic sum of the existing noise level and the adjusted noise level.

Noise Levels Associated with Development of the Eastern Portion of the Baylands

Soil Stabilization – Deep Dynamic Compaction

Soil stabilization of individual development sites east of the Caltrain right-of-way would involve consecutive weeks of deep dynamic compaction. Steady noise from deep dynamic compaction is emitted at relatively low levels from mobile cranes that move and drop weights during deep dynamic compaction activities. Noise levels from this activity within the eastern portion of the Baylands are presented in **Table 4.12-26**, which indicates that the closest off-site sensitive receptors would be on Lathrop Avenue in San Francisco, approximately 1,100 feet away. The closest on-site receptors could be Baylands housing within the Roundhouse and Bayshore districts, which could be as close as 500 feet to deep dynamic compaction activities.

[267] As early increments of construction are completed and buildings are occupied, ambient noise levels would likely increase as traffic is added to the roadway network. **Table 4.12-24** therefore represents a worst-case analysis.

Deep dynamic compaction activities within the eastern portion of the Baylands would increase noise levels by 0.5 dBA at the nearest off-site receptor and by 2.4 dBA at the nearest potential on-site sensitive receptors.

Table 4.12-26: Daytime Noise from Deep Dynamic Compaction within the Eastern Portion of the Baylands

Representative Sensitive Receptor	Existing Daytime Noise Level (dBA, L_{eq})[a]	Loudest Two Noise Sources	Reference Noise Level (dBA)[b]	Distance to Receptor (feet)	Usage Factor	Adjusted L_{eq} Level (dBA, L_{eq})[c]	Resultant Noise Level (dBA, L_{eq})[d]	Increase over Existing Noise Level (dBA)
Lathrop Avenue, San Francisco	—	Crane	61.1	1,100	16%	45.7	—	NA
	—	Crane	61.1	1,100	16%	45.7	—	NA
	58	Combined Total	61.1	1,100	16%	48.8	58.5	+0.5
Baylands Housing	—	Crane	80.6	500	16%	52.6	—	NA
	—	Crane	80.6	500	16%	52.6	—	NA
	57	Combined Total	80.6	500	16%	55.6	59.4	+2.4

SOURCE: Environmental Science Associates, 2025.

ABBREVIATION: NA = not applicable

NOTES:

a. Existing noise level based on long- or short-term noise monitoring.
b. Reference value is for equipment is an L_{max} at 50 feet as published by the FHWA.
c. Noise level is adjusted for number of equipment, distance to receptors, and usage factor.
d. Resultant noise level is the logarithmic sum of the existing noise level and the adjusted noise level.

Installation of Pile Foundations within the Eastern Portion of the Baylands

After compaction, foundation work for individual structures would commence within the eastern portion of the Baylands. Because of the presence of the landfill below the landfill cap, it is conservatively assumed that all structures within the former landfill area would require installation of pile foundations. Pile installation may also be required for the Geneva Avenue bridge over the Caltrain right-of-way.

Pile driving would be the loudest construction activity and would occur intermittently over the projected two-year building construction period east of the Caltrain right-of-way as well as during a portion of the Geneva Avenue bridge construction. Intermittent noise from pile driving during these construction activities would affect not only existing off-site sensitive receptors but also Baylands residents who move to the site during earlier development increments.

The reference noise level for pile driving is 101 dBA, L_{max} at a distance of 50 feet, which equates to a noise level of 107 dBA L_{max} at a distance of 25 feet. Should pile driving be required for the Geneva Avenue bridge, it could occur as close as 100 feet to residential structures in the western portion of the Baylands, provided they are constructed and occupied prior to the bridge. Noise levels from pile driving activities at the nearest existing sensitive receptors are presented in **Table 4.12-27**. Off-site receptors as far as 1,100 feet or more away from pile driving activities

could experience significant noise increases of 10 dBA or more over existing daytime noise levels, potentially affecting dozens of existing receptors in Brisbane and San Francisco.

Table 4.12-27: Daytime Noise from Pile Driving Activities within the Eastern Portion of the Baylands

Representative Sensitive Receptor	Existing Daytime Noise Level (dBA, L_{eq})[a]	Loudest Two Noise Sources	Reference Noise Level (dBA)[b]	Distance to Receptor (feet)	Usage Factor	Adjusted L_{eq} Level (dBA, L_{eq})[c]	Resultant Noise Level (dBA, L_{eq})[d]	Increase over Existing Noise Level (dBA)
Lathrop Avenue, San Francisco	—	Crane	80.6	1,100	16%	45.7	—	NA
	—	Pile Driving	101.3	1,100	20%	67.4	—	NA
	58	Combined Total	101.3	1,100	—	67.5	68.0	+10.0
Baylands Housing	—	Crane	80.6	500	16%	52.6	—	NA
	—	Pile Driving	101.3	500	20%	74.3	—	NA
	57	**Combined Total**	**101.3**	**500**	**—**	**74.3**	**74.4**	**+17.4**

SOURCE: Environmental Science Associates, 2025.

ABBREVIATION: NA = not applicable

NOTES:

a. Existing noise level based on long- or short-term noise monitoring.
b. Reference value is for equipment at 50 feet as published by the FHWA.
c. Noise level is adjusted for number of equipment, distance to receptors, and usage factor.
d. Resultant noise level is the logarithmic sum of the existing noise level and the adjusted noise level.

Building Construction within the Eastern Portion of the Baylands

Once foundations are in place for a given structure, vertical construction would begin, which would involve a standard set of construction equipment. Vertical construction would also be required for the Geneva Avenue bridge over the Caltrain right-of-way. Noise levels from building construction activities at the nearest sensitive receptors are presented in **Table 4.12-28**. Noise from building construction would increase daytime noise levels by 2.2 dBA at the nearest off-site receptor. At adjacent on-site receptors, noise from building construction would increase daytime noise levels by 7.0 dBA over existing levels.

Road Construction within the Eastern Portion of the Baylands

Noise levels from roadway construction and paving activities[268] at the nearest sensitive receptors are presented in **Table 4.12-29**. Noise from road construction activities would increase noise levels by 2.1 dBA at the nearest sensitive receptor and have lesser increases at other, more distant sensitive receptors.

[268] The Specific Plan proposes Geneva Avenue bridge construction as part of development east of the Caltrain right-of-way.

Table 4.12-28: Daytime Noise from Building Construction in the Eastern Portion of the Baylands

Representative Sensitive Receptor	Existing Daytime Noise Level (dBA, L_{eq})[a]	Loudest Two Noise Sources	Reference Noise Level (dBA)[b]	Distance to Receptor (feet)	Usage Factor	Adjusted L_{eq} Level (dBA, L_{eq})[c]	Resultant Noise Level (dBA, L_{eq})[d]	Increase over Existing Noise Level (dBA)
Lathrop Avenue, San Francisco	—	Tractors/ Loaders/ Backhoes	84.0	1,100	40%	53.2	—	NA
	—	Tractors/ Loaders/ Backhoes	84.0	1,100	40%	53.2	—	NA
	58	Combined Total	84.0	1,100	40/40%	56.2	60.2	+2.2
Baylands Housing	—	Tractors/ Loaders/ Backhoes	84.0	500	40%	60.0	—	NA
	—	Tractors/ Loaders/ Backhoes	84.0	500	40%	60.0	—	NA
	57	Combined Total	84.0	500	40/40%	63.0	64.0	+7.0

SOURCE: Environmental Science Associates, 2025.

ABBREVIATION: NA = not applicable

NOTES:

a. Existing noise level based on long- or short-term noise monitoring.
b. Reference value is for equipment at 50 feet as published by the FHWA.
c. Noise level is adjusted for number of equipment, distance to receptors, and usage factor.
d. Resultant noise level is the logarithmic sum of the existing noise level and the adjusted noise level.

Table 4.12-29: Daytime Noise from Construction of Roadways within the Eastern Portion of the Baylands, including the Geneva Avenue Bridge

Representative Sensitive Receptor	Existing Daytime Noise Level (dBA, L_{eq})[a]	Loudest Two Noise Sources	Reference Noise Level (dBA)[b]	Distance to Receptor (feet)	Usage Factor	Adjusted L_{eq} Level (dBA, L_{eq})[c]	Resultant Noise Level (dBA, L_{eq})[d]	Increase over Existing Noise Level (dBA)
Lathrop Avenue, San Francisco	—	Tractors/ Loaders/ Backhoes	84.0	1,200	40%	52.4	—	NA
	—	Graders	85.0	1,200	40%	53.4	—	NA
	58	Combined Total	85.0	1,200	NA	56.0	60.1	+2.1

SOURCE: Environmental Science Associates, 2025.

ABBREVIATION: NA = not applicable

NOTES:

a. Existing noise level based on long- or short-term noise monitoring.
b. Reference value is for equipment at 50 feet as published by the FHWA.
c. Noise level is adjusted for number of equipment, distance to receptors, and usage factor.
d. Resultant noise level is the logarithmic sum of the existing noise level and the adjusted noise level.

Noise from On- and Off-Site Public Facilities Construction

Relocated Fire Station No. 81

Under the Specific Plan, the existing Brisbane Fire Station No. 81 at 3445 Bayshore Boulevard would be relocated to 140 Valley Drive. The new location would be approximately 1,000 feet from the nearest sensitive receptor on San Francisco Avenue in Brisbane. Noise levels from building construction activities at the nearest sensitive receptor are presented in **Table 4.12-30**. Noise levels from building construction activities would increase by 1.4 dBA at the nearest receptor and would be below this level at other receptors.

Table 4.12-30: Daytime Noise from Construction of the Relocated Fire Station

Representative Sensitive Receptor	Existing Daytime Noise Level (dBA, L_{eq})[a]	Loudest Two Noise Sources	Reference Noise Level (dBA)[b]	Distance to Receptor (feet)	Usage Factor	Adjusted L_{eq} Level (dBA, L_{eq})[c]	Resultant Noise Level (dBA, L_{eq})[d]	Increase over Existing Noise Level (dBA)
San Francisco Avenue, Brisbane	—	Forklift	83.4	1,000	40%	53.4	—	NA
	—	Tractor	84.0	1,000	40%	54.0	—	NA
	61	Combined Total	84.0	1,000	40/40%	56.7	62.4	+1.4

SOURCE: Environmental Science Associates, 2025.

NOTES:

ABBREVIATION: NA = not applicable

a. Existing noise level based on long- or short-term noise monitoring.
b. Reference value is for equipment at 50 feet as published by the FHWA.
c. Noise level is adjusted for number of equipment, distance to receptors, and usage factor.
d. Resultant noise level is the logarithmic sum of the existing noise level and the adjusted noise level.

New Fire Station within the Baylands

A new fire station that would primarily serve the Baylands and Sierra Point would be located adjacent to US 101, between Beatty Avenue and the Geneva Avenue extension. The new station would be approximately 1,080 feet from the nearest sensitive receptor on Lathrop Avenue in San Francisco. Construction noise levels at the nearest sensitive receptors are presented in **Table 4.12-31**. Noise from fire station construction activities would increase existing noise levels by 2.2 dBA at the nearest sensitive receptor, with lesser increases at other receptors.

Table 4.12-31: Daytime Noise from Construction of a New Fire Station within the Baylands

Representative Sensitive Receptor	Existing Daytime Noise Level (dBA, L_{eq})[a]	Loudest Two Noise Sources	Reference Noise Level (dBA)[b]	Distance to Receptor (feet)	Usage Factor	Adjusted L_{eq} Level (dBA, L_{eq})[c]	Resultant Noise Level (dBA, L_{eq})[d]	Increase over Existing Noise Level (dBA)
Lathrop Avenue, San Francisco	—	Forklift	83.4	1,000	40%	52.7	—	NA
	—	Tractor	84.0	1,000	40%	53.3	—	NA
	58	Combined Total	84.0	1,000	NA	56.1	60.2	+2.2

SOURCE: Environmental Science Associates, 2025.

ABBREVIATION: NA = not applicable

NOTES:

a. Existing noise level based on long- or short-term noise monitoring.
b. Reference value is for equipment at 50 feet as published by the FHWA.
c. Noise level is adjusted for number of equipment, distance to receptors, and usage factor.
d. Resultant noise level is the logarithmic sum of the existing noise level and the adjusted noise level.

On-Site Switching Substation Construction

A new 2-acre on-site switching substation would be constructed within the Baylands along the north side of Geneva Avenue east of the Caltrain right-of-way (see **Figure 3-52**). The substation would be approximately 1,200 feet from the nearest off-site noise-sensitive receptor in the Little Hollywood neighborhood in San Francisco. Construction activities for the substation would involve equipment similar to that considered above for construction of the fire station and at a further distance from receptors.

Construction of Water Recycling Facility, Off-Site Recycled Water Lines, Water Storage Tank, and Battery Storage Facilities

An on-site water recycling facility, 3.16-million-gallon water storage tank with interconnecting water mains, and battery storage facilities would be constructed between the Caltrain right-of-way and Tunnel Avenue, north of the Kinder Morgan Tank Farm. This area is approximately 2,000 feet from the nearest off-site sensitive receptor on Cliff Swallow Court in Brisbane. Activities for construction of the water recycling facility and water storage tank would involve equipment similar to that analyzed above for construction of the relocated fire station and would be located farther from sensitive receptors. Battery storage facility construction would be modest with construction of foundation slabs, placement of battery units on those slabs, and electrical work to connect the facility to the grid. Consequently, noise impacts from construction of the battery storage facility would be less than impacts for fire station construction.

The water recycling facility would also serve off-site users in the Sierra Point and Oyster Point portions of South San Francisco in the future and would, therefore, require construction of pipelines for conveyance of recycled water along Tunnel Avenue and Bayshore Boulevard. Trenching work for pipeline installations would generally consist of cut-and-cover methods except where crossing of Caltrain tracks and US 101 may require use of trenchless methods,

such as jack-and-bore techniques. The total length of pipeline to be constructed would depend on the number and location of end users but is conservatively estimated to be up to 5.5 miles (including 0.5 mile of pipeline within the project site to connect to the off-site recycled water pipeline). The receptors nearest to the pipeline trenching activity would be the Sierra Point Trailer Park, approximately 90 feet west of the eastern right-of-way of Bayshore Boulevard.

Noise levels from pipeline trenching activity at the nearest sensitive receptor are presented in **Table 4.12-32**. Noise levels from pipeline trenching activity would increase by 14.7 dBA at the nearest receptor and would be below the level of significance at receptors located further than 160 feet. Pipeline construction would progress at a rate of approximately 100 feet per day. Although the total duration of noise increases in excess of 10 dBA above ambient levels would be less than 2 weeks, individual receptors would experience construction noise for approximately 3 days as construction approaches then recedes.

Table 4.12-32: Daytime Noise from WRF Pipeline Trenching Activity

Representative Sensitive Receptor	Existing Daytime Noise Level (dBA, L_{eq})[a]	Loudest Two Noise Sources	Reference Noise Level (dBA)[b]	Distance to Receptor (feet)	Usage Factor	Adjusted L_{eq} Level (dBA, L_{eq})[c]	Resultant Noise Level (dBA, L_{eq})[d]	Increase over Existing Noise Level (dBA)
Sierra Point Mobile Home Park, Brisbane	—	Tractors/ Loaders/ Backhoes	84.0	90	40%	74.9	—	NA
	—	Graders	85.0	90	40%	75.9	—	NA
	64	Combined Total	85.0	90	40%	78.5	78.7	+14.7

SOURCE: Environmental Science Associates, 2025.

ABBREVIATION: NA = not applicable

NOTES:

a. Existing noise level based on long- or short-term noise monitoring.
b. Reference value is for equipment at 50 feet as published by the FHWA.
c. Noise level is adjusted for number of equipment, distance to receptors, and usage factor.
d. Resultant noise level is the logarithmic sum of the existing noise level and the adjusted noise level.

Trenchless construction methods require pits at both the launching and receiving ends of the bore. These pits would have to be shored with interlocking sheet piles that would likely require use of a vibratory pile driver. The exact locations of pits are currently unknown but the initial crossing from Tunnel Avenue toward Bayshore Boulevard would likely be the location closest to receptors (residences on San Francisco Avenue). At a conservatively estimated distance of 400 feet, vibratory pile driving would generate a noise level of 76 dBA, which would be 15 dBA over the existing ambient level at these receptors. The duration of pile driving activity would be approximately 2 weeks.

ROAD CONSTRUCTION

Development within the western portion of the Baylands would involve construction of internal roadways, including the extension of Geneva Avenue from Bayshore Boulevard to the Caltrain right-of-way. Noise levels from road building and paving activities at the nearest sensitive receptors are presented in **Table 4.12-33**. Noise levels from road building activities would increase by 6.3 dBA at the nearest receptor and would be below this level at other receptors.

Table 4.12-33: Daytime Noise from Roadway Construction in the Western Portion of the Baylands

Representative Sensitive Receptor	Existing Daytime Noise Level (dBA, L_{eq})[a]	Loudest Two Noise Sources	Reference Noise Level (dBA)[b]	Distance to Receptor (feet)	Usage Factor	Adjusted L_{eq} Level (dBA, L_{eq})[c]	Resultant Noise Level (dBA, L_{eq})[d]	Increase over Existing Noise Level (dBA)
MacDonald Avenue, San Francisco	—	Tractors/ Loaders/ Backhoes	84.0	420	40%	61.5	—	NA
	—	Graders	85.0	420	40%	62.5	—	NA
	60	Combined Total	85.0	420	40%	65.1	66.3	+6.3

SOURCE: Environmental Science Associates, 2025.

ABBREVIATION: NA = not applicable

NOTES:

a. Existing noise level based on long- or short-term noise monitoring.
b. Reference value is for equipment at 50 feet as published by the FHWA.
c. Noise level is adjusted for number of equipment, distance to receptors, and usage factor.
d. Resultant noise level is the logarithmic sum of the existing noise level and the adjusted noise level.

Underground Utility Installation

Underground utility installation for the western portion of the Baylands would require cut and fill trenching activities within the Baylands and along Bayshore Boulevard Geneva Avenue and Airport Boulevard. In-ground utility installation would occur throughout the western portion of the Baylands and would be closest to off-site sensitive receptors where it occurs within the Bayshore Boulevard right-of-way. Additionally, trenching would be required to provide connection to and improvements at the existing PG&E Martin Substation across Bayshore Boulevard from the Baylands. Noise levels from trenching activities, which would be the noisiest activity during underground utility installation, are presented in **Table 4.12-34**, which indicates that trenching activities would increase existing daytime noise levels by 9.7 dBA at the nearest sensitive receptor (MacDonald Avenue in San Francisco), with lesser increases at other sensitive receptors.

Table 4.12-34: Daytime Noise from Trenching for Underground Utility Construction

Representative Sensitive Receptor	Existing Daytime Noise Level (dBA, L_{eq})[a]	Loudest Two Noise Sources	Reference Noise Level (dBA)[b]	Distance to Receptor (feet)	Usage Factor	Adjusted L_{eq} Level (dBA, L_{eq})[c]	Resultant Noise Level (dBA, L_{eq})[d]	Increase over Existing Noise Level (dBA)
Cliff Swallow Court, Brisbane	—	Tractors/ Loaders/ Backhoes	84.0	845	40%	55.5	—	NA
	—	Graders	85.0	845	40%	56.5	—	NA
	60	Combined Total	85.0	845	40%	59.0	62.5	+2.5
MacDonald Avenue, San Francisco	—	Tractors/ Loaders/ Backhoes	84.0	260	40%	65.7	—	NA
	—	Graders	85.0	260	40%	66.7	—	NA
	60	Combined Total	85.0	260	40%	69.2	69.7	+9.7

SOURCE: Environmental Science Associates, 2025.

ABBREVIATION: NA = not applicable

NOTES:

a. Existing noise level based on long- or short-term noise monitoring.
b. Reference value is for equipment at 50 feet as published by the FHWA.
c. Noise level is adjusted for number of equipment, distance to receptors, and usage factor.
d. Resultant noise level is the logarithmic sum of the existing noise level and the adjusted noise level.

Significance Conclusion for Impact NOI-1

Impact NOI-1 would be significant for the following reasons.

- Some construction activities, such as concrete pours or other work to maintain safety or avoid traffic impacts, may require nighttime activity. While such construction outside of the hours and days allowed for construction work could be permitted, subject to approval of an exception permit, such nighttime activities would result in temporary noise level increases exceeding the quieter nighttime ambient noise levels by more than 10 dBA at any Baylands housing that might be occupied at the time such construction activities are being undertaken.
- Noise generated by trucks hauling soil from the eastern to the western portion of the Baylands would cause an increase in noise greater than 3 dBA in the following areas that have a current L_{dn} of less than 60 dBA:
    - Bayshore Boulevard between Tunnel Avenue and Southern Access Road (+5.4 dBA);
    - Tunnel Avenue between Beatty Avenue and Blanken Avenue (+12.2 dBA);
    - Blanken Avenue between Tunnel Avenue and Bayshore Boulevard (+10.5 dBA); and
    - Bayshore Boulevard between Blanken Avenue and Northern Access Road (+6.9 dBA).

- Pile driving activities would increase daytime noise levels by more than 10 dBA in the following locations:
  - Pile driving within the western portion of the Baylands:
    - Desmond Street, San Francisco (+21 dBA);
    - Wheeler Avenue, San Francisco (+15 dBA); and
    - Baylands residential areas once they are constructed and occupied (up to +43 dBA).
  - Pile driving within the eastern portion of the Baylands:
    - Lathrop Avenue, San Francisco (+10 dBA); and
    - Baylands residential areas once they are constructed and occupied (up to +17.4 dBA).
- Building construction adjacent to an occupied dwelling unit within the Baylands would increase daytime noise levels by more than 10 dBA (+32 dBA).

Program EIR Mitigation Measures

MM NOI-1a: Construction Noise Control (Program EIR Mitigation Measure 4.J-4a). All applicants for site-specific development within the Baylands shall implement site-specific noise attenuation measures during all construction- related activities under the supervision of a qualified acoustical consultant as a pre-requisite to issuance of site grading(s). These measures shall be included in a Noise Control Plan that shall be submitted for review and approval by the City of Brisbane Building Department to ensure that construction noise does not exceed the standards set forth in the City's Noise Ordinance. These attenuation measures shall include all or any combination of the following control strategies:

- Limit construction activities to between 7:00 a.m. and 7:00 p.m. Monday through Friday and between 9:00 a.m. and 7:00 p.m. on weekends and holidays;
- Pile driving and/or other extreme noise- generating activities (L_{max} greater than 90 dBA) would be limited to between 8:00 a.m. and 4:00 p.m. Monday through Friday, with no extreme noise-generating activity permitted between 12:30 p.m. and 1:30 p.m. No extreme noise-generating activities would be allowed on weekends and holidays;
- Equipment and trucks used for construction shall use the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds);

- Impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for construction shall be hydraulically or electrically powered wherever possible to avoid noise associated with compressed air exhaust from pneumatically powered tools. Where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves shall be used where feasible; this could achieve a reduction of 5 dBA. Quieter procedures, such as use of drills rather than impact tools, shall be used;
- Stationary noise sources shall be located as far as possible from adjacent receptors, and they shall be muffled and enclosed within temporary sheds, incorporate insulation barriers, or include other measures;
- Erect temporary plywood noise barriers around the construction site when adjacent occupied sensitive land uses are present within 75 feet;
- Implement "quiet" pile-driving technology (such as pre-drilling of piles and the use of more than one pile driver to shorten the total pile driving duration), where feasible, in consideration of geotechnical and structural requirements and conditions;
- Use noise control blankets on building structures as buildings are erected to reduce noise emission from the site; and
- Use cushion blocks to dampen impact noise.

MM NOI-1b: Noise complaint response and monitoring (Program EIR Mitigation Measure 4.J-4b). Prior to City issuance of grading permits, applicants for site-specific development projects shall submit to the Brisbane Community Development Department a list of measures that will be undertaken to respond to and track complaints pertaining to construction noise, including:

- A procedure for notifying the City staff of complaints;
- A plan for posting on-site signs pertaining to permitted construction days and hours, complaint procedures, and the contact person who should be notified in the event of a problem;
- A listing of telephone numbers (during regular construction hours and off-hours);
- Designation of an on-site construction complaint manager;
- Notification of neighbors within 300 feet of the construction area about the estimated duration of pile driving activity at least 30 days in advance of the activity; and

- A preconstruction meeting with the job inspectors and the general contractor/on-site project manager to confirm that noise mitigation and practices (including construction hours, neighborhood notification, posted signs, etc.) are completed.

Significance Conclusion for Impact NOI-1 with Implementation of Program EIR Mitigation Measures

Implementation of Mitigation Measure MM NOI-1a and MM NOI-1b would reduce construction noise to less than significant, with the exception of localized noise increases of more than 10 dBA at new residences within the Specific Plan area from both vertical building construction and installation of pile foundations. Site-specific geotechnical conditions may require impact pile driving as close as 50 feet to occupied residential uses within the Baylands, which could generate noise as great as 21 dBA above ambient levels in proximate off-site locations. Therefore, construction noise impacts on occupied residential uses would be significant and would require additional mitigation.

Additional Mitigation Measures

MM NOI-1c: Construction Hours along existing Roadways and for Concrete Pours. Approval of an exception permit pursuant to the provisions of Brisbane Municipal Code Section 8.28.080 shall be required for any activities where daytime construction activities would cause substantial traffic congestion or safety hazards such as construction along existing roadways and for required nighttime concrete pours. Exception permits for these nighttime construction activities shall be conditioned to provide for a minimal duration of nighttime construction and identify detailed methods to be employed to minimize noise during any such required nighttime construction.

MM NOI-1d: Document measures to achieve noise performance standards. Prior to issuance of (1) a demolition permit, (2) a grading permit for the mass movement of soil from the eastern to the western portion of the Baylands, (3) a grading or building permit for a site-specific development project, or (4) a permit for infrastructure construction, the applicant shall have a Construction Noise Control Plan prepared by a qualified acoustical consultant to identify the specific measures to be implemented to ensure at least one of the following performance standards set forth in Brisbane Municipal Code Chapter 18.28 are achieved:

- No individual piece of equipment shall produce a noise level exceeding 83 dBA at a distance of 25 feet from the source thereof, unless an exception permit pursuant to Brisbane Municipal Code Section 8.280.080 is acquired from the City of Brisbane.

- The noise level at any point outside of the property plane of the project shall not exceed 86 dBA.

The Construction Noise Control Plan shall be submitted to the City of Brisbane Community Development Department for review and approval prior to permit issuance.

Where applicable to the permit being requested, each of the following measures shall be implemented as requirements of the requested permit to achieve the above performance standards:

1. **Construction Site Perimeter Barrier.** To reduce noise levels for work adjacent to residences, schools, or other noise-sensitive land uses, a noise barrier(s) shall be constructed along the edge of the work site facing the receptor(s). Barriers shall be constructed either with two layers of 0.5-inch-thick plywood (joints staggered) and K-rail or other support, or with a limp mass barrier material weighing 2 pounds per square foot. If commercial barriers are employed, such barriers shall be constructed of materials with a Sound Transmission Class (STC) rating of 25 or greater.
2. **Stationary-Source Equipment Placement.** Stationary noise sources, such as generators and air compressors, shall be located as far from adjacent properties as possible. These noise sources shall be muffled and enclosed within temporary sheds, shall incorporate insulation barriers, or shall use other measures as determined by the Community Development Director to provide equivalent noise reduction.
3. **Stationary-Source Equipment Local Barriers.** For stationary equipment, such as generators and air compressors that will operate for more than one week within 500 feet of a noise-sensitive land use, the construction contractor shall provide additional localized barriers around such stationary equipment that block the line of sight[269] to neighboring properties.
4. **Temporary Power.** Temporary power poles instead of on-site generators shall be used wherever feasible.
5. **Construction Equipment and Haul Trucks.** Equipment and trucks used for soil loading, transport, unloading, grading, and deep dynamic compaction shall use the best commercially available noise control features (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures, and acoustically attenuating shields or

[269] If a noise barrier does not block the line of sight between the noise source and the receptor, the barrier will provide little or no attenuation.

shrouds). Exhaust mufflers shall be provided on pneumatic tools when in operation for more than one week within 500 feet of noise-sensitive land use. All equipment shall be properly maintained.

6. **Impact Tool Use.** The Construction Noise Control Plan shall incorporate measures to reduce the use of heavy impact tools and locate use of such tools away from the property line to the extent feasible. Impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for demolition and construction shall be hydraulically or electrically powered wherever possible to avoid noise associated with compressed air exhaust from pneumatically powered tools. Where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used.[270] External jackets on the tools themselves shall be used where feasible.[271] Quieter procedures, such as use of drills rather than impact tools, shall be used.
7. **Truck Traffic Restrictions.** Truck idling shall be restricted to no more than two consecutive minutes per trip end. Trucks shall load and unload materials within approved construction or staging areas, rather than idling or loading/unloading on local streets. If truck staging is required, the staging area shall be located along major roadways with higher traffic noise levels or away from the noise-sensitive receptors, where such locations are available.
8. **Noise Control Blankets.** Where feasible, noise control blankets shall be used on building structures to reduce noise emission from the construction site.

MM NOI-1e: Installation of Pile Foundations. Impact pile driving shall be prohibited for any building within the Baylands unless a site-specific geotechnical study along with any test borings recommended by that study demonstrate that geologic or other unique conditions exist that preclude the use of quieter, alternative pile installation techniques, such as but not limited to:

- "Press-in" method of pile driving such as the Giken Silent Pile Driver[272]
- Piles that could be pre-drilled for auger-cast or micro pile foundation installation

[270] This type of muffler can lower noise levels from the exhaust by up to about 10 dBA.

[271] External jackets on tools could achieve a reduction of 5 dBA.

[272] The Giken Silent Pile Driver is capable of generating reduced noise levels of approximately 64 dBA at 16 meters (Giken Ltd. 2024).

- Vibratory pile driving where press-in or pre-drilled pile installation is infeasible

Where no alternative to impact pile driving is available, noise mitigation at the site of the pile driving, such as, but not limited to, baffles, echo barriers, cushion blocks, or other methods shall be implemented to ensure that noise from the impact of the pile driving hammer is minimized to achieve compliance with the performance standards set forth in Brisbane Municipal Code Chapter 18.28.[273]

Significance Conclusion for Impact NOI-1 with Implementation of all Mitigation Measures

Implementation of Mitigation Measures MM NOI-1a through MM NOI-1e would reduce construction noise to both off-site receptors and to occupied on-site receptors within the Baylands. However, building construction adjacent to occupied dwelling units within the Baylands and roadway noise increases along four roadway segments would still remain significant and unavoidable because of the proximity of receptors and unavailability of feasible mitigation strategies. Additionally, construction noise impacts from the installation of pile foundations would remain significant since site-specific geotechnical conditions may require impact pile driving as close as 50 feet to occupied residential uses within the Baylands and generate noise as great as 21 dBA above ambient levels in proximate off-site locations, exceeding the 10 dBA over existing ambient level standard. Construction noise impacts therefore would be significant and unavoidable with implementation of all feasible mitigation.

The geotechnical reports prepared for the western and eastern portions of the Baylands (ENGEO 2022) acknowledge that quieter methods of pile foundation installation are dependent on building design and site-specific geotechnical conditions, requiring recommendations for specific pile types and installation techniques to be provided based on design-level geotechnical reports for individual building sites. Thus, the potential for traditional impact pile driving and its associated noise levels over a large portion of the site, including the potential for simultaneous impact pile driving to occur at different locations, remain. Consequently, even with implementation of noise reduction measures such as cushion blocks,[274] the potential for achieving the 16 dBA reduction necessary for construction noise to be below 10 dBA over existing ambient levels is unlikely, as barriers would need to be of substantial height to block the line of sight from proposed residential buildings that could be up to 50 feet in height. Therefore, given that foundation construction for Phase 1 development would occur over a 10-year period and could likely involve some degree of impact pile driving, including

[273] Such barriers can be installed immediately adjacent to the pile lead itself and reduce noise by as much as 30 dBA.

[274] To reduce noise from impact pile driving, a "cushion," typically made of wood, is placed between the hammer and the pile.

simultaneous pile driving at different locations, even with identified mitigation measures, this impact would be significant and unavoidable.

b. Impact NOI-2: Permanent Increase in Ambient Noise Levels from Stationary Sources

Methodology for Determining Significance

The Baylands Specific Plan proposes the development of office, commercial, retail, event, and conference space; on-site utility plants; and other noise-generating sources, such as back-up generators and mechanical equipment for residential towers. These uses and sources could substantially increase noise levels at noise-sensitive land uses or could expose sensitive receptors to noise levels exceeding applicable noise standards.

Analysis of Impact NOI-2 considers noise from sources such as mechanical equipment, water recycling facility, battery storage facilities, solar farm, electrical substation, school yard, truck loading docks and delivery activities, public address systems and amplified sound, fire stations, and parking lots by describing documented reference noise levels associated with these sources and determining noise levels at sensitive receptors based on their distance from Baylands-related noise sources. The resulting noise levels were compared to the applicable threshold to determine significance.

Impact Assessment

Mechanical Equipment Noise

Following construction, operation of new land uses within the Baylands would increase ambient noise levels in the immediate vicinity of the Specific Plan area through the on-site use of stationary equipment such as heating, ventilation, and air conditioning (HVAC) systems and emergency generators that would be required by building code for emergency egress of high-rise buildings more than 75 feet in height or for utility facilities such as the water recycling facility. Because mechanical equipment is commonly available with noise-attenuating enclosures designed to meet local noise ordinances (Soundfighter 2024), the equipment's noise generation for individual buildings would not exceed applicable noise thresholds. However, depending on the height of buildings and their proximity, as well as the location of HVAC equipment, the noise generated by HVAC equipment installed on different buildings would combine to increase noise depending on their distance from each other and whether there is a clear line of site between them. For example, this could occur when people using rooftop recreation areas for residential tower buildings in the Bayshore and Roundhouse districts have direct line-of-sight to HVAC units on rooftops of two adjacent buildings.

Emergency back-up generators for fire stations and for buildings with occupied space above 75 feet would be tested regularly and operated occasionally. The Bay Area Air Quality Management District permits emergency back-up generators to operate for up to 50 hours per year, or on average of about 1 hour per week (BAAQMD 2024). The noise generated by generator testing would be akin to that of a diesel-powered truck engine, and while this occasional testing would result in a temporary increase in noise levels over ambient conditions, such maintenance operations would be infrequent and of limited duration.

The northern portion of the Specific Plan area lies directly adjacent to the City and County of San Francisco boundary. Sensitive receptors within San Francisco would be adversely affected should noise sources within the Baylands exceed the City and County of San Francisco's noise ordinance. Sections 2909(a) and (b) of the San Francisco Municipal Code limit noise produced at residential properties to no more than 5 dBA above the local ambient condition at any point outside the property plane, and at commercial properties to no more than 8 dBA above the local ambient condition at any point outside the property plane.

Section 2909(d) states that in order to prevent sleep disturbance, no fixed noise source may cause the noise level measured inside any sleeping or living room in a dwelling unit on residential property to exceed 45 dBA between 10:00 p.m. and 7:00 a.m. or 55 dBA between 7:00 a.m. and 10:00 p.m. with windows open, except where building ventilation is achieved through mechanical systems that allow windows to remain closed.

The Baylands Specific Plan does not depict specific building designs for buildings within the Baylands and does not set exact locations or specifications for mechanical equipment. Therefore, it is speculative to precisely estimate noise levels at specific individual receptor locations that would result from operations of such stationary noise sources. It is reasonably foreseeable that mechanical equipment of Baylands buildings may be as close as 250 feet to existing sensitive receptors and as close as 50 feet to future sensitive receptors within the Baylands. **Table 4.12-35** presents reference noise levels for these sources for informational purposes. Given the data in **Table 4.12-35** and the possibility that sensitive receptors could be as close as 50 feet away, the potential exists for unobstructed noise levels to be 70 dBA or higher at the nearest sensitive receptor locations, which would exceed 5 dB over ambient noise at sensitive receptors as well as City of Brisbane exterior noise standards where existing ambient levels are below 60 dBA.

Table 4.12-35: Reference Noise Levels for Stationary Noise Sources

Stationary Noise Source	Documented Sound Levels (dBA)	Source
HVAC Equipment	72–78 dBA at 30 feet without acoustical treatments	Trane, *Engineering Bulletin, Sound Data and Application Guide for New and Quieter Air-Cooled Series R Chiller*, 2002.
Standby Diesel Generator	75–90 dBA at 23 feet (size dependent) without acoustical enclosure	Cummins Power Generation, *Sound Attenuation and Weather-Protective Enclosures for Generators Sets from 10 to 1,000 kW*, 2008.
Parking Structure (4 stories)	53–58 dBA, L_{max} at 75 feet	Illingworth and Rodkin, *Santana Row Parking Structure Project Noise Assessment, San José, California*, 2014.
Loading Dock	77 dBA, L_{eq} at 20 feet	Urban Crossroads, *Moreno Valley Walmart Noise Impact Analysis, City of Moreno Valley*, 2015.
Battery Storage Facility (3 GW with substation)	37 dBA at 3,300 feet	Rincon, *Key Energy Storage Project Noise and Vibration Study*, October 2022.
Solar Farm (200 MW)	40 dBA at 1,500 feet	ESA, *Luna Valley Solar Project Draft Environmental Impact Report*, May 2021.
Electrical Substation (2.9 acres w/ HVAC)	61 dBA at 40 feet	ESA, *Denny Substation Project, Noise Discipline Report, Seattle, WA*, March 2014.
School Yard	55 L_{eq} and 75 L_{max} at 50 feet	Bollard Acoustical Consultants, *Environmental Noise and Vibration Assessment for the Upper Westside Specific Plan*, December 2022.

SOURCE: Data compiled by Environmental Science Associates in 2023.

ABBREVIATIONS: dBA = A-weighted decibels; ESA = Environmental Science Associates; GW = gigawatt; HVAC = heating, ventilation, and air conditioning; kW = kilowatt; MW = megawatt.

It is reasonably foreseeable that, for tower buildings and commercial buildings, mechanical equipment would be roof-mounted and shielded by screens or parapets, which would generally reduce noise levels for sensitive receptors, except those in taller adjacent buildings. For example, residential tower buildings in the Bayshore and Roundhouse districts could have rooftop recreation areas that have direct line-of-sight to HVAC units on rooftops of two adjacent buildings. Low-density buildings, such as residential structures, would have setbacks as small as 5 feet. While the Specific Plan requires screening for all building types,[275] it cannot be assured that unspecified shielding, alone, would be sufficient to reduce noise below applicable thresholds.

Noise from Parking Lots and Structures

Commercial mixed-use parking noise activities of multiple vehicle types arriving and departing a parking area (of 300 vehicle stalls), including engines starting and stopping, car doors opening and closing, and persons conversing as they enter and exit vehicles,[276] have been documented to result in an exposure of 58 dB L_{max} at a reference distance of 75 feet inclusive of car horns

[275] Baylands Specific Plan, page 109.

[276] Assembly Bill No. 1307 added sections to the Public Resources Code stating that the effects of noise generated by project occupants and their guests on human beings is not a significant effect on the environment for residential projects for purposes of CEQA.

(Illingworth and Rodkin 2014). Given that monitored values within and around the Baylands are over 48 dBA, the predicted noise levels from the proposed parking areas would be less than 5 dBA L_{eq} and comply with the Brisbane Municipal Code.

Noise from Loading Docks

Commercial heavy/medium-duty truck delivery truck noise activities generate an unshielded noise level of 77 dBA at a distance of 20 feet or about 69 dBA at 50 feet. Assuming loading movements of one semi-trailer delivery during any given hour, the predicted noise increase would be more than 5 dBA where the existing noise level is 59 dB L_{eq} or less at 50 feet away, which is a condition that could occur during early morning deliveries (before 7:00 a.m.). The Specific Plan does not provide standards to ensure that noise generated at loading docks would fall below applicable thresholds.

Water Recycling Facility Noise Impacts on Existing and Future Receptors

The Specific Plan proposes a water recycling facility that would be located on the west side of Tunnel Avenue north of Visitacion Creek Park. As such, this facility could be located as close as 150 feet to high-density residential uses within the Roundhouse District.

The following types of operational noise are associated with treatment facilities and/or pump stations at the water recycling facility:

- Noise from the operation of mechanical equipment, including pumps, blowers, fans, centrifuges, and cogeneration engine or turbine generators
- Noise from standby electrical generation equipment (e.g., back-up generators for treatment facilities or pump stations during a power outage)
- Noise from water flowing over weirs

The technical memorandum (Brown and Caldwell 2022) for the Baylands water recycling facility states that, to control noise, buildings with interior acoustical treatment and noise-trapping louvers would house all mechanical equipment that generates noise (e.g., blowers) but did not provide specifications for the extent to which these louvers would reduce noise. While the operations of the water recycling facility would be required to comply with Brisbane Municipal Code Section 8.28.030, without noise-generating specifications for mechanical equipment, it cannot be reasonably assumed that the water recycling facility would generate noise below the 5 dBA increase over ambient threshold at the nearest noise sensitive receptor.

Battery Storage Facility Noise Impacts on Existing and Future Receptors

The proposed battery storage facility would occupy an approximately 10-acre parcel along the west side of Tunnel Avenue north of Visitacion Creek Park. This facility could be located as close as 150 feet to Baylands high-density residential uses within the Roundhouse District.

High-voltage electrical equipment at a battery storage facility generates tonal humming and buzzing that can be annoying to a listener. A recent acoustical study for a 3-gigawatt (GW) storage facility in Fresno County modeled noise from such a facility including an on-site substation to be 37 dBA at 3,300 feet. At a distance of 150 feet, this noise level could be as high as 64 dBA. This is a conservative estimate given that the proxy battery facility is much larger than that proposed for the Baylands. Additionally, noise impacts are typically greater when a battery storage facility has a consolidated rather than a distributed inverter design (Ecology 2024).

The Caltrain right-of-way would separate the facility from proposed residential uses, and the existing ambient noise levels in this location was recorded to be 58 dBA. Given the unknown design for the proposed battery storage facility and specifics with regard to locations of battery storage liquid cooling units as well as inverters, the potential exists for operational noise to exceed the 5 dBA increase over ambient threshold.

Solar Farm Noise Impacts on Existing and Proposed Receptors

The proposed solar farm would occupy an approximately 55-acre parcel east of Tunnel Avenue south of Visitacion Creek. This facility would be located more than 1,500 feet from the nearest off-site sensitive receptor and 1,500 feet from the nearest Baylands sensitive receptor within the Roundhouse District.

A recent acoustical study for a 200-megawatt (MW)[277] solar farm in Fresno County modeled noise from such a facility, including an on-site substation, to be 40 dBA at 1,500 feet. This is a conservative estimate given that the proxy solar farm is much larger than that proposed for the Baylands. Based on (1) the analysis for this proxy project and (2) the existing ambient noise level at the nearest receptor location was recorded to be 58 dBA, noise from the solar farm would not result in an increase of 5 dBA over the existing ambient noise levels in the on-site or off-site locations and would not, therefore, exceed applicable significance thresholds.

Noise from New Electrical Substation

The Specific Plan provides for a new electrical substation on a 2-acre site located north of Geneva Avenue east of the Caltrain right-of-way. This substation could be located as close as 400 feet to Baylands high-density residential uses within the Roundhouse District and approximately 1,700 feet from the nearest existing off-site noise-sensitive receptor.

An acoustical study for a regional substation serving a plan area (Environmental Science Associates 2014) modeled noise from a 3-acre facility, including on-site HVAC equipment, to be 61 dBA at 40 feet. At the 400-foot distance to the nearest on-site receptor, the resultant noise

[277] This is a conservative comparison. Based on the proposed projects with 85,000 MWh per year of solar generation, the PVWatts calculator of the National Renewable Energy Laboratory estimates that the proposed project within the City of Brisbane would have a system size of 53 megawatts.

level would be expected to be 41 dBA. Based on (1) the analysis for this proxy project and (2) the existing nighttime ambient noise levels at the on-site receptor location was recorded to be 52 dBA, such noise would not be 5 dBA over the existing ambient nighttime noise levels in this location (52 dBA). The substantial distance of the substation from off-site receptors would preclude operational noise impacts on off-site receptors.

School Yard Noise

The Specific Plan provides for a middle school on a 5-acre parcel in the northwest corner of the Icehouse District. School playgrounds, playing fields, and outdoor play areas (of 50 children) generate noise levels of approximately 55 dB L_{eq} at a reference distance of 50 feet (Bollard 2022).

The nearest existing noise-sensitive uses to the middle school site are residences located approximately 1,100 feet distant. At this distance, the exposure of noise generated by school yard use at these residences would be approximately 36 dB L_{eq}. The nearest proposed noise-sensitive uses within the Baylands would be housing adjacent to the school in the southern end of the Roundhouse District.

Section 8.28.050 (C) of the Brisbane Municipal Code specifically exempts activities conducted on parks, public playgrounds, and school grounds from otherwise applicable noise standards, provided such parks, playgrounds, and school grounds are owned and operated by a public entity or private school. The noise levels from the middle school would nevertheless be below the ambient noise level conditions at the nearest existing residential uses.

Relocated Fire Station Noise

Under the Specific Plan, the existing Brisbane Fire Station No. 81 at 3445 Bayshore Boulevard would be relocated to 140 Valley Drive. In addition to the existing engine company at the relocated Station No. 81, a ladder company would operate from Station No. 81 until the new fire station within the Baylands is operational, at which time the ladder company would be relocated to the new station. The relocated station would be the same distance to the nearest existing noise-sensitive receptor (1,000 feet) as the existing location, so this relocation would not result in a noise increase at sensitive receptors. While the Specific Plan would increase the level of demand of the fire station with a commensurate increase in the number of emergency calls using lights and sirens, this demand would be split between the relocated and new fire station to be constructed and operated within the Baylands. Consequently, the number of emergency calls using lights and sirens from each station would remain equivalent to the baseline, and the relocated fire station would not generate noise in excess of the 5 dBA increase over ambient threshold.

New Fire Station Noise

A new fire station would be constructed primarily to serve the Baylands and Sierra Point. This station would be located in the northeastern corner of the Baylands adjacent to the US 101 freeway between Beatty Avenue and Geneva Avenue.

The typical practice for emergency siren use is to use sirens to break traffic at intersections or warn drivers of the emergency vehicle approach when traffic is congested, or at intersections where sound is the only way the oncoming driver can be alerted to the emergency vehicle's presence. While the use of sirens in connection with emergency responses would generate a high level of sound along the response routes, Section 8.28.050 of the Brisbane municipal code specifically exempts emergencies from the noise level restrictions set out in Sections 8.28,030 and 8.26.040. Additionally, a siren on an ambulance would not constitute a stationary noise source. Therefore, the new fire station would not cause a significant impact during operations because it would not represent a stationary source that would generate noise in excess of 5 dBA[278] L_{eq} above the ambient level at any sensitive receptor nor would it generate noise in excess of any of the standards of Brisbane Municipal Code Section 8.28.030, as it would be exempt.

Noise Impacts of Public Gathering Spaces

The Baylands development would provide the following public gathering spaces:

- Community Fields (7.4 acres)
- Sunnydale Park (0.8 acre)
- Baylands Park (5.8 acres)
- Roundhouse Park (3.7 acres)
- Bayshore Caltrain Station Plaza (1.4 acres)

The proposed multi-purpose community gathering space at Sunnydale Park and Baylands Park, in the community event area, could be as close as 50 feet to the low-density residential units in the Bayshore District Development Plan. Brisbane Municipal Code Section 8.28.070 establishes restrictions on amplified sound and would apply to events at the outdoor performance space.

Operators of events at the outdoor performance space would be required to obtain a special event permit from the City of Brisbane to operate any loudspeaker or sound amplifier, as required by Municipal Code Section 8.28.070. Such a permit would require additional operational conditions, such as hours of operation, direction of speakers, or sound level restrictions. Such events would not be regular occurrences and would be restricted by permit

[278] As stated in the Physical Environmental Setting section, a change in noise levels of 5 dB is considered to be a readily perceivable difference.

conditions to certain hours. This would limit the noticeable increase in noise generated by occasional events at the outdoor performance space. However, such events may indeed result in a temporary noise increase in excess of 5 dBA[279] L_{eq} above the ambient level at a sensitive receptor.

Aggregate Noise Level Increases from Multiple Stationary Sources throughout the Baylands

The preceding analyses address single or multiple noise sources within a single site, operated by a single operator controlling those sources, and assesses the potential for different source types within the Baylands to comply with the Brisbane noise ordinance and applicable significance thresholds. However, the aggregate operation of all these sources together would increase noise levels generated within the Specific Plan area as a whole. Because the exact future location and configuration for all of these sources cannot be currently known, it is not possible to provide a quantitative estimate of the aggregate increase in noise levels at specific off-site receptor locations.

There are 39 identified blocks that would be developed within the Baylands, and many of these blocks would accommodate multiple buildings. While individual HVAC systems alone will comply with the City's noise ordinance, it is reasonable to acknowledge that the aggregate operation of dozens of HVAC systems across the Specific Plan area would result in an increase in ambient noise levels at existing off-site receptors. When combined with other stationary noise sources such as the water recycling facility, parking lots, and loading docks, operational increase over ambient noise levels that would exceed applicable significance thresholds is possible. The City of Brisbane enforces its noise ordinance standards based on the operation of sources within a single site operated by a single operator controlling those sources. While multiple sources may individually operate consistent with the restrictions of Municipal Code Section 8.28.030, the potential exists for an aggregate increase that would result in stationary sources to result in a permanent noise increase in excess of 5 dBA L_{eq}. Therefore, aggregate stationary source noise impacts would be significant.

Significance Conclusion for Impact NOI-2

Impact NOI-2 would be significant for the following reasons.

- Stationary Source Impacts
    - Specific Plan requirements for screening of HVAC units do not provide specific provisions that would ensure compliance with applicable thresholds for sensitive receptors in Brisbane (Section 8.26.030 of the Municipal Code) and San Francisco (Section 2909 of the Police Code). Thus, HVAC units could exceed applicable

[279] As stated in Section 4.12.3, Environmental Setting, a change in noise levels of 5 dB is considered to be a readily perceivable difference.

noise ordinance requirements. Even if each HVAC unit within the Specific Plan area would meet applicable noise standards and depending on the location and screening provided for individual units, the aggregate noise from multiple HVAC units operating simultaneously could be more than 10 dB over ambient noise levels.

- Noise increases from commercial heavy/medium-duty truck deliveries would be more than 5 dBA where the existing noise level is 59 dB L_{eq} or less at 50 feet away, which is a condition that could occur during early morning deliveries in nighttime hours (before 7:00 a.m.). The Specific Plan does not contain requirements that would ensure loading docks are sited such that the building acts as a barrier from noise for adjacent noise-sensitive land uses or by provision of noise barriers or limits on delivery times and access routes, potentially allowing noise from loading activities to exceed applicable noise standards.
- The technical memorandum (Brown and Caldwell 2022) prepared for the Baylands water recycling facility states that, to control noise, buildings with interior acoustical treatment and noise-trapping louvers would house all mechanical equipment that generates noise (e.g., blowers). However, because only a conceptual design was available for the facility, the technical memorandum could not provide specifications that would permit analysis of the extent to which these louvers would reduce noise. In the absence of such design specifications, a quantitative demonstration that the facility would meet applicable noise standards is not possible and it must be assumed that noise levels from operations would exceed applicable thresholds.
- Noise increases from battery storage systems which could be located as close as 150 feet to Baylands high-density residential uses within the Roundhouse District, would generate noise that could increase ambient noise levels in excess of 5 dBA.
- Temporary events employing amplified sound within the multi-purpose community gathering spaces at Sunnydale Park and Baylands Park, in the community event area, could be as close as 50 feet to the low-density residential units in the Bayshore District Development Plan and result in an increase in ambient noise levels in excess of 5 dBA.
- Aggregate operation of all stationary noise sources together would increase noise levels generated within the Specific Plan that could result in an increase in ambient noise levels in excess of 5 dBA.

Program EIR Mitigation Measures

MM NOI-2a: Project Design Features (Program EIR Mitigation Measure 4.J-3a). All development within the Baylands shall incorporate the following design features into the final site plans prior to issuance of a building permit:

- Building equipment (e.g., heating, ventilation, and air conditioning units) shall be located away from nearby residences, on building rooftops, or adequately shielded within an enclosure that effectively blocks the line of sight of the source from receivers in order to meet a performance standard of 5 dBA over existing ambient noise levels (generally perceptible increase to most persons) for this source which would potentially operate more than 20 minutes in a given hour.
- Designated truck delivery areas (e.g., loading bays) shall be located at least 100 feet from residences to maintain noise levels of less than 5 dBA over existing monitored levels, except within mixed-use buildings containing both residential and commercial uses. Truck delivery bays and waste collection areas shall be located so that they are blocked by Project buildings or designed with noise reduction barriers to reduce noise impacts on residences or other sensitive receptors.
- Where truck delivery bays are provided within mixed-use buildings containing both residential and commercial uses, they shall be located and designed so as to minimize the effects of noise from loading activities on residential uses within the building.

Significance Conclusion for Impact NOI-2 with Implementation of Program EIR Mitigation Measures

Implementation of Mitigation Measure MM NOI-2a would reduce noise impacts associated with stationary building equipment and truck delivery areas and loading docks. Mitigation Measure NOI-2a would be sufficient to ensure that these sources would meet Significance Threshold NOI-2 with respect to Municipal Code Section 8.28.030 and a noise increase in excess of 5 dBA L_{eq} above ambient levels.

However, significant impacts from other stationary noise sources would remain. Specifically, significant noise impacts associated with the battery storage systems, water recycling facility, amplified sound, and an overall aggregate noise increase from stationary sources not envisioned in the Program EIR would remain significant.

Additional Mitigation Measures

MM NOI-2b: Compliance with Brisbane Municipal Code. Prior to the issuance of any building permit, the applicant shall demonstrate to the satisfaction of the Brisbane Community Development Director that all mechanical equipment is selected and designed to meet the performance standards of Sections 8.28.030 and 8.28.040 of the Brisbane Municipal Code and that the noise from the building's mechanical equipment would limit increasing noise levels more than 5 dBA L_{eq} above ambient at any sensitive receptor.

If projected noise levels from mechanical equipment would exceed 5 dBA L_{eq} above ambient at any sensitive use or City standards, appropriate noise reduction measures shall be provided. Methods of achieving these standards include using low-noise-emitting HVAC equipment, locating HVAC and other mechanical equipment within a rooftop mechanical penthouse, and using shields and parapets to reduce noise levels sufficiently to meet the performance standards of Sections 8.28.030 and 8.28.040 of the Brisbane Municipal Code at adjacent land uses.

For example, emergency generators would be required to include industrial-grade silencers that can reduce exhaust noise by 12 to 18 dBA or residential-grade silencers that can reduce such noise by 18 to 25 dBA as necessary. (ASHRAE 2006). Acoustical screening can also be applied to exterior noise sources of the proposed central utility plants and can achieve up to 15 dBA of noise reduction (ENC 2014).

An acoustical study shall be prepared by a qualified acoustical engineer during final building design to evaluate the noise generated by building mechanical equipment and to identify the necessary design measures (e.g., equipment selection, acoustical housing, or screening) to be incorporated to limit increased noise levels to no more than 5 dBA L_{eq} above ambient at any sensitive receptor and meet the City's Municipal Code noise standards. The study shall be submitted to the Brisbane Community Development Director for review and approval before the issuance of any building permit.

MM NOI-2c: Loading Dock Noise. Loading docks shall be located and designed so as to not increase noise levels more than 5 dBA L_{eq} above ambient at any sensitive receptor and meet the City's Municipal Code noise standards.

An acoustical study shall be prepared by a qualified acoustical engineer during final building design to identify the necessary design measures (e.g., loading dock location, acoustical barriers) to be incorporated and demonstrate that loading docks will meet the City's Municipal Code noise standards and not

increase noise levels more than 5 dBA L_{eq} above ambient at any sensitive receptor. The study shall be submitted to the Brisbane Community Development Director for review and approval before the issuance of any building permit.

Potential design measures that could be implemented to achieve this performance standard (the City's Municipal Code noise standards) may include, but are not limited to, shielding from features integrated into site design, and/or restrictions on hours for commercial deliveries within the commercial mixed-use areas. Such measures shall be determined by the site-specific noise impact study that addresses commercial mixed-use truck delivery activities, completed by a qualified noise consultant once site-specific development plans are completed, but must be designed to achieve the performance standards in Brisbane Municipal Code Sections 8.28.030 and 8.28.040.

MM NOI-2d: Water Recycling Facility Noise. The Baylands water recycling facility shall be designed to limit noise to no more than 5 dBA above the ambient level at any sensitive receptor and meet the performance standards of Brisbane Municipal Code Sections 8.28.030 and 8.28.040. Available measures shall be incorporated into the facility's design to meet applicable noise standards, such as locating mechanical equipment within a mechanical penthouse, using shields and parapets to reduce noise levels at nearby land uses, and additional measures, such as those provided below in **Table 4.12-36** as required, to limit noise to no more than 5 dBA above ambient at any sensitive receptor and meet the performance standards of Brisbane Municipal Code Sections 8.28.030 and 8.28.040.

An acoustical study shall be prepared by a qualified acoustical engineer during final building design to evaluate the noise generated by building mechanical equipment and to identify the necessary design measures to be incorporated to meet the City's standards of Brisbane Municipal Code Sections 8.28.030 and 8.28.040. The study shall be submitted to the Brisbane Community Development Director or the Director's designee for review and approval before the issuance of any building permit.

Table 4.12-36: Major Water Recycling Facility Treatment Process Equipment and Available Noise Mitigation Methods

Noise Source	Potential Noise Reduction Methods
Effluent Pumps	Motor room absorptive surface treatments Acoustic louvers Ventilation duct silencers
Aeration Blowers	Acoustic louvers Ventilation duct silencers Blower inlet silencers Blower vent silencers
Influent and Bypass Pumps Stations	Pump room absorptive surface treatments Acoustic louvers Ventilation duct silencers
Back-Up Generator	Industrial-grade silencers
Odor Control Exhaust Fans	Fan room absorptive surface treatments Acoustic louvers Ventilation duct silencers Sound-rated fan selection and specification Fan duct silencers

SOURCE: Environmental Science Associates, 2025.

MM NOI-2e: Utility-Scale Battery Storage Facility. Battery storage facilities shall be designed to limit noise to no more than 5 dBA above ambient at any sensitive receptor and meet the performance standards of Brisbane Municipal Code Sections 8.28.030 and 8.28.040. Potential design measures that could be implemented to achieve this performance standard (the City's Municipal Code noise standards) may include, but are not limited to, using distributed inverter system design, selection of quiet cooling systems, and acoustical shielding for inverters and cooling equipment. Such measures shall be determined by the site-specific noise impact study completed by a qualified noise consultant once site-specific development plans are completed but must be designed to achieve the performance standards in Brisbane Municipal Code Sections 8.28.030 and 8.28.040.

MM NOI-2f: Amplified Sound. The applicant or operator of all amplified music events within public parks shall prepare and implement a Noise Control Plan for operations at the proposed entertainment venues to reduce the potential for noise impacts from public address and/or amplified music. This Noise Control Plan shall contain the following elements:

- All activities held at the community event area consisting of amplified speech or music shall be limited to daytime hours of 7 am to 10 pm.

- Amplified speech or music levels shall be maintained at or below the performance standard of fifteen (15) dBA above the local ambient to any receiver (Brisbane Municipal Code Sections 8.28.070).

Significance Conclusion for Impact NOI-2 with Implementation of all Mitigation Measures

Mitigation Measures NOI-2a through NOI-2f would be sufficient to achieve operation of individual stationary sources to be consistent with the noise standards of Brisbane Municipal Code Sections 8.28.030, 8.28.040, and 8.28.050.[280] However, ensuring that resultant noise levels could be maintained less than 5 dBA above ambient levels is not reasonably feasible given that (1) each given receptor would need a baseline measurement in a noise environment with multiple sources; (2) the noise environment would be constantly changing due to other noise sources as the Specific Plan develops; and (3) construction activities discussed under Impact NOI-1 would hinder the establishment of baseline noise levels within the Specific Plan area for many years.

Therefore, the residual impact of each of these stationary noise source types would be significant and unavoidable with mitigation. Additionally, the aggregate operation of all these sources would increase noise levels generated within the Specific Plan area as a whole. Because the exact future location and configuration for all of these sources cannot be known at this time, it is not possible to ensure that the aggregate increase in noise levels at specific off-site receptor locations from stationary sources would not result in a permanent noise increase in excess of 5 dBA L_{eq}. Therefore, aggregate stationary source noise impacts would also be significant and unavoidable with mitigation.

c. Impact NOI-3: Permanent Increase in Ambient Noise Levels along Roadways

Methodology for Determining Significance

Traffic noise levels were determined for weekday peak commute hours based on the transportation analysis (Fehr & Peers 2023) and assessed for the following scenarios:

1. Existing conditions.
2. Existing plus buildout of Specific Plan Phase 1 (assumed to be 2035).
3. Existing plus full buildout of the Specific Plan (assumed to be 2040).

[280] All stationary sources constructed by the Specific Plan would be within the City of Brisbane and subject to the enforcement of the standards of the City of Brisbane. While some receptors immediately north of the Baylands district would be adjacent to future development within the City of San Francisco, they would still be subject to the standards of the City of Brisbane.

For roadway segments where modeling of traffic noise increases indicated that these roadways could experience noise increases in excess of applicable thresholds, existing and future land uses were evaluated to determine whether the presence of other noise sources, such as rail activity, would render these increases from traffic alone unnoticeable, and whether sensitive receptors would or would not be present to be affected roadway noise increases.

All traffic volumes provided in the project's transportation analysis and used in these roadway noise analyses were provided by Fehr & Peers Transportation Consultants and reflect the proximity of Bayshore Caltrain Station and internal trip reduction resulting from the proposed mix of uses. The modeled with-project scenarios also account for implementation of required Transportation Demand Management (TDM) measures developed by Fehr & Peers Transportation Consultants. These TDM measures represent all feasible available measures for reducing vehicle miles traveled (Fehr & Peers 2023).

Impact Assessment

Vehicle trips resulting from Specific Plan development would generate roadway noise within the Baylands and surrounding environment. Modeling of traffic noise increases along area roadway segments is presented in **Table 4.12-37** for mid-term, Year 2035 conditions projected at the completion of Phase 1 development in the western portion of the Baylands. **Table 4.12-38** presents projected conditions at full buildout of the Baylands in 2040. As shown in these tables, three of the 15 segments that were analyzed would experience roadside noise increases exceeding applicable thresholds:

- Geneva Avenue from Carter Street to Bayshore Boulevard (2040)
- Tunnel Avenue from Blanken Avenue to north of Beatty Road (2040)
- Guadalupe Canyon Parkway west of North Hill Drive (2035 and 2040)

These segments were then assessed to determine whether the presence of other noise sources, such as rail activity, would render these increases from traffic alone unnoticeable, or whether sensitive receptors are not present along these roadways to be affected by these increases.

All three of the above roadway segments have sensitive land uses along them that would be adversely affected by roadway noise increases caused by Baylands traffic. None of these segments are located near US 101 or near any other source of consistent noise generation that would render the increase unnoticeable.

As demonstrated in **Table 4.12-37**, Phase 1 Baylands-generated traffic (2035) would exceed applicable thresholds along one of the 15 roadways segments that were analyzed. At full Specific Plan buildout (2040), Baylands-generated traffic would exceed applicable thresholds along three of the 15 roadways segments that were analyzed as shown in **Table 4.12-38**.

Table 4.12-37: Weekday Peak Hour Traffic Noise Increases along Baylands Area Roadways at the Completion of Specific Plan Phase 1 (assumed to be 2035)

Roadway Segment	Existing	Applicable Increase Threshold (dB)	Existing plus Project (2035)	dBA Difference	Significant Increase?
Bayshore Boulevard from Blanken Road to Geneva Road	69.2	1.5	68.7	-0.5	No
Bayshore Boulevard from Geneva Avenue to Old County Road/Tunnel Avenue	72.9	1.5	74.1	1.2	No
Bayshore Boulevard from Old County Road/Tunnel Avenue to southern city limits	73.9	1.5	74.6	0.5	**No**
Geneva Avenue from Carter Street to Bayshore Boulevard	68.1	1.5	68.7	0.6	No
Geneva Avenue extension from Bayshore Boulevard to US 101 ramps	NA	NA	61.7	NA	No[a]
Tunnel Avenue from Old County Road/Tunnel Avenue to south of Lagoon Road	65.1	1.5	67.9	2.8	No[b]
Tunnel Avenue from Blanken Avenue to north of Beatty Road	64.7	3	66.2	1.5	No
Blanken Avenue from Executive Park Boulevard to Gillette Avenue	56.5	5	59.2	2.7	No
Blanken Avenue from Bayshore Boulevard to Tunnel Avenue	60.2	3	62.0	1.8	No
Visitacion Avenue from Bayshore Boulevard to Mansell Street	56.6	5	58.3	1.7	No
Sunnydale Avenue from Bayshore Boulevard to Santos Street	58.4	5	57.6	-0.8	No
Main Street from Bayshore Boulevard to Linda Vista Drive	55.8	5	57.1	1.3	No
Guadalupe Canyon Parkway west of North Hill Drive	**68.7**	**1.5**	**70.9**	**2.2**	**Yes**
Old County Road from Bayshore Boulevard to San Francisco Avenue	62.2	3	62.3	0.1	No
San Bruno Avenue from Bayshore Boulevard to Glen Park Way	56.2	5	56.7	0.5	No

SOURCE: Traffic data compiled by Fehr & Peers in 2022. Noise modeling performed by Environmental Science Associates in 2023.

ABBREVIATIONS: dB = decibels; dBA = A-weighted decibels; NA = not applicable as road does not currently exist.

NOTES:

a. This roadway does not currently exist nor are there any existing noise-sensitive land uses along it.
b. There are no noise-sensitive uses along this roadway segment.
c. This impact along this segment would be less than significant because existing noise from the adjacent US 101 would reduce the realized increase to less than 1.0 Dba.

Table 4.12-38: Weekday Peak Hour Traffic Noise Increases along Baylands Area Roadways at Specific Plan Buildout (assumed to be 2040)

Roadway Segment	Existing	Applicable Increase Threshold (dB)	Existing plus Project (2040) with TDM	dBA Difference	Significant Increase?
Bayshore Boulevard from Blanken Road to Geneva Road	69.2	1.5	67.1	-2.1	No
Bayshore Boulevard from Geneva Avenue to Old County Road/Tunnel Avenue	72.9	1.5	73.8	0.9	No
Bayshore Boulevard from Old County Road/Tunnel Avenue to southern city limits	73.9	1.5	74.7	0.8	No
Geneva Avenue from Carter Street to Bayshore Boulevard	**68.1**	**1.5**	**70.4**	**2.3**	**Yes**
Geneva Avenue extension from Bayshore Boulevard to US 101 ramps	NA	NA	70.1	NA	No[a]
Tunnel Avenue from Old County Road/Tunnel Avenue to south of Lagoon Road	65.1	1.5	65.6	0.5	No
Tunnel Avenue from Blanken Avenue to north of Beatty Road	**64.7**	**3**	**67.7**	**3.0**	**Yes**
Blanken Avenue from Executive Park Boulevard to Gillette Avenue	56.5	5	57.6	1.1	No
Blanken Avenue from Bayshore Boulevard to Tunnel Avenue	60.2	3	59.5	-0.7	No
Visitacion Avenue from Bayshore Boulevard to Mansell Street	56.6	5	57.0	0.4	No
Sunnydale Avenue from Bayshore Boulevard to Santos Street	58.4	5	57.8	-0.6	No
Main Street from Bayshore Boulevard to Linda Vista Drive	55.8	5	56.5	0.7	No
Guadalupe Canyon Parkway west of North Hill Drive	**68.7**	**1.5**	**70.9**	**2.2**	**Yes**
Old County Road from Bayshore Boulevard to San Francisco Avenue	62.2	3	62.4	0.2	No
San Bruno Avenue from Bayshore Boulevard to Glen Park Way	56.2	5	56.3	0.1	No

SOURCE: Traffic data compiled by Fehr & Peers in 2022. Noise modeling performed by Environmental Science Associates in 2023.

ABBREVIATIONS: dB = decibels; dBA = A-weighted decibels; NA = not applicable since the road does not currently exist; TDM = Transportation Demand Management.

NOTES:

a. This roadway does not currently exist nor are there any existing noise-sensitive land uses along it.

Significance Conclusion for Impact NOI-3

As described above, one of the 15 roadways segments would exceed applicable thresholds in 2035, and three of the 15 roadway segments would exceed applicable thresholds in 2040. Thus, a significant impact would result.

Program EIR Mitigation Measures

No mitigation measures are being carried forward from the Program EIR.

Additional Mitigation Measures

MM NOI-3: Traffic Noise Reduction Measures. Each of the following traffic noise reduction measures that are determined by the Brisbane City Engineer or the Daly City or San Francisco City Engineer to be feasible for physical improvements along roadway segments in those cities shall be implemented to reduce the projected roadway noise increases along (1) Geneva Avenue from Carter Street to Bayshore Boulevard, (2) Tunnel Avenue from Blanken Avenue to north of Beatty Road, and (3) Guadalupe Canyon Parkway west of North Hill Drive by an estimated 0.1 to 0.8 dBA for each measure.

- **Reduction in Traffic Volumes:** Because one of the primary components of traffic noise generation is daily vehicle volume, a reduction in traffic noise levels would result from reducing the overall volume of Baylands-generated traffic. However, achieving a 3 dB reduction in traffic noise levels would require a 50 percent reduction in projected traffic volumes. As the increase in noise along Guadalupe Canyon Parkway is predicted to be 3.2 dBA over the applicable significance criterion of a 1.5 dBA increase (4.7 dBA total increase), an almost 50 percent reduction in the Baylands traffic volume contribution would be necessary to achieve a less than significant roadway noise increase.

  Specific Plan development already includes implementation of a Transportation Demand Management (TDM) program to encourage and create incentives for travel other than via use of single-occupant vehicle trips, in accordance with Brisbane ordinance and San Mateo County's Congestion Management Program requirements. The trip reductions attributable to required implementation of TDM measures are already reflected in the traffic volumes in the transportation analysis that was used to estimate roadway noise increases in Table 4.12-37 and Table 4.12-38.

- **Reduction in Vehicle Speeds:** Another factor in the generation of traffic noise is vehicle speed. Higher speeds translate to higher traffic noise levels. Each 5-mph reduction in average speed provides approximately 1.4 dBA of noise reduction on an average basis (L_{eq}/DNL). Speed reductions may be achieved by posting new speed limits or through installation of traffic calming infrastructure such as roundabouts. However, vehicle speed limits are set based on speed surveys, safety considerations, and other factors, rather than achieving lower traffic noise levels. In addition, the City and County of San Francisco has jurisdiction over portions of affected roadways within San Francisco (the northern portions of Bayshore Boulevard and Tunnel Avenue). As a result,

implementation of this measure could only be assured if speed surveys and safety studies demonstrated the feasibility of reducing speed limits.

- **Construction of Noise Barriers:** Reductions in traffic noise levels can be achieved through the construction of traffic noise barriers. However, at locations where openings or gaps in the barriers would be required for driveway openings or to maintain safe sight distances, the effectiveness of noise barriers would be severely compromised. In addition, this measure would typically require construction of noise barriers on the property of the impacted receptor, rather than within a public right-of-way, so there is no guarantee the impacted receptor would agree to the construction of such barriers. Therefore, barriers are generally not an available means of mitigation.
- **Acoustical Treatments for Existing Impacted Residences:** Sound insulation treatments, such as replacing existing windows and doors with sound-rated windows and doors and providing a suitable form of forced-air mechanical ventilation, can reduce indoor noise levels sufficient to achieve an interior noise level of 45 dBA DNL, as recommended for interior residential spaces. This measure would typically require construction of replacement doors and windows on the property of the impacted receptor, rather than within a public right-of-way, so there is no guarantee the impacted receptor would agree to the construction of such improvements. Therefore, implementation of the measure cannot be assured.
- **Use of Setbacks:** A 4.5 dBA decrease in traffic noise levels can be achieved for each doubling of distance between the roadway centerline and affected residences. However, because the locations of existing residences that would be impacted by Baylands-generated increases in traffic noise are fixed, as are the roadways of concern, this measure is not viable for the existing impacted residences.
- **Engineered Asphalt:** Noise-reducing pavement types, such as rubberized asphalt, have been shown to provide an appreciable noise level reduction relative to other pavement types. Studies have demonstrated these measures reduce traffic noise levels along local roadways by 3 to 5 dBA DNL. Engineered asphalt intended to reduce tire-pavement noise could potentially reduce noise levels along impacted roadways. This approach would consist of the replacement of dense grade asphalt with open-grade or rubberized asphalt. However, this approach is likely infeasible. The FHWA currently does not endorse the use of quiet asphalt as a noise abatement measure because the effectiveness of quiet paving declines as the pavement ages and will cease to serve its noise abatement function if

not properly maintained.[281] To be a permanent mitigation, subsequent repaving would also have to use "quieter" pavements. The working assumption for maintenance assumes replacement of the asphalt overlay to occur every 7 years as opposed to a 20-year cycle for ridged pavement (Caltrans 2018). The cost per mile is approximately 26 percent more than for Portland cement with standard asphalt (Institute of Noise Control Engineering 2014).

Significance Conclusion for Impact NOI-3 with Implementation of All Mitigation Measures

The above discussed potential mitigation strategies are limited and not feasible for all roadways, or in the case of Geneva Avenue and Tunnel Avenue, would be in the purview of other jurisdictions. However, these measures are identified as a menu of available measures to mitigate traffic noise impacts to the extent feasible. As such, it cannot be assured that these measures could be implemented to the degree sufficient to reduce impacts to a less-than-significant level.

Mitigation Measure MM NOI-3 is proposed; however, the degree to which it could feasibly be implemented to reduce traffic noise to a less than significant level cannot be assured. Therefore, Impact NOI-3 would be significant and unavoidable.

d. Impact NOI-4: Exposure of People to Railroad, Freeway, and Airport Noise

Methodology for Determining Significance

CEQA requires the analysis of potential adverse effects of a project on the environment, and the California Supreme Court ruled in *BIA v. BAAQMD* that CEQA does not apply to the potential effects of the environment on a project, except where the project's impacts would exacerbate adverse existing conditions. The *BIA v. BAAQMD* court provided several exceptions to the general principle that CEQA does not require an evaluation of the impacts of the environment on a project. Among these exceptions is when a project is exposed to potential noise and safety impacts on the site's occupants because of the site's proximity to an airport (Public Resources Code Section 21096).

[281] The FHWA does not recognize special wearing surfaces as a noise abatement measure under 23 CFR 772 Procedures for Abatement of Highway Traffic Noise and Construction Noise. The noise reduction properties degrade as traffic loads wear these surfaces out over time, resulting in the abatement measure no longer fulfilling its intended abatement commitment and the surface requiring replacement. Replacement with standard pavement would in turn be a potentially substantial adverse environmental effect. Ensuring similar continuing performance for a quiet pavement abatement technique would require regular testing because the acoustical benefits may deteriorate; also required is the agency's commitment, backed by funding, to maintain the acoustical properties of the pavement in perpetuity.

Therefore, this analysis uses the future noise exposure estimates for railroad operations within the Caltrain right-of-way and the US 101 freeway. Additionally, the analysis uses the future noise exposure estimates provided in the Airport Land Use Compatibility Plan for SFO to assess the potential for Baylands development to exacerbate aircraft noise impacts. A significant impact would result if Specific Plan were to locate noise-sensitive uses within the 65 dBA CNEL noise contour of a public or public use airport and thereby expose residents within the Specific Plan area to excessive noise levels.

Because DNL (and CNEL) measurements apply a penalty to noise during the sensitive nighttime hours, the interior noise standard of 45 dBA DNL is used to address sleep disturbance impacts.[282]

Impact Assessment

Freeway and Railroad Noise

As shown in **Table 4.12-10**, noise monitoring within the Baylands indicates that the US 101 freeway currently generates a Day Night Noise Level "DNL" of 75 dBA in the northeastern portion of the Baylands and 69 dBA in the southeastern portion of the Baylands. Both long-term monitoring locations in the western Baylands (LT-5 and LT-6) where residences and the hotel are proposed have existing noise levels below 65 DNL. Because of their distance from the freeway and intervening structures that would be developed within the Baylands, residential and hotel uses proposed within the western portion of the Specific Plan area would experience freeway noise levels below 65 DNL.

Table 4.12-10 also indicates that both long-term monitoring locations in the western Baylands (LT-5 and LT-6 where residences and the hotel are proposed) have existing noise levels below 65 DNL. However, proposed high density residential towers along the frontage road would be located immediately adjacent to the Caltrain tracks and Bayshore Station with no intervening structures. FTA guidance indicates that noise from rapid rail transit station would require an acoustical analysis if the station is located within 200 feet of a receptor (FTA, 2018). Therefore, because high density residential towers along the frontage road would be located within this distance, specific windows and building materials would be required to ensure that interior noise exposure are consistent with the requirements of Title 24 interior noise standard of 45 dBA, DNL. Exposure to rail noise levels would exceed FTA exposure criteria at the closest locations.

[282] Sleep disturbance metrics have sometimes been applied to evaluate new sources of aircraft noise. There is, however, debate within the scientific community and a lack of concurrence regarding the relationship between aircraft noise and sleep disturbance, especially as related to determining a definitive noise dose and the response relationship for sleep disturbance. Thus, even if noise events are measured using supplemental metrics (e.g., SEL, L_{max}, TA, etc.), there is no scientific concurrence on the appropriate "threshold" to compare such measurements against, when it comes to sleep disturbance (LAWA 2020).

Airport Noise

The Baylands site is approximately 3.5 miles northwest of the SFO boundary and approximately 4 miles from the nearest SFO runway. The Specific Plan area is outside of the SFO 65 CNEL noise contour (see **Figure 4.12-2**), but is within Airport Influence Area A, which is defined as an area where aircraft are flown at an altitude of 10,000 feet or less above mean sea level a minimum of once weekly. The SFO Airport Land Use Compatibility Plan considers the types of uses proposed for the Baylands to be to be compatible with Airport Influence Area A.

Significance Conclusion for Impact NOI-4

Residential and hotel development adjacent to the west side of the Caltrain right-of-way would exacerbate the noise impacts of rail operations by exposing residents and hotel guests to DNL noise levels in excess of 65 dBA. This represents a significant impact for which mitigation is required.

The Baylands is located outside the 65 dB CNEL noise contour of SFO airport operations. In addition, proposed residential and hotel uses are proposed to be located a sufficient distance from the freeway that residents and hotel guests would not be subject to DNL noise levels in excess of 65 dBA.

Program EIR Mitigation Measures

MM NOI-4a: Residential Exposure to Railroad Noise (Program EIR Mitigation Measure 4.J-1a). All residential development within the Specific Plan area shall minimize the exposure of people within the Specific Plan area to noise from Caltrain and High-Speed Rail operations through construction of noise barriers or maintenance of buffer distances, and shall adhere to the following noise performance standards:

- Exterior noise level of below 65 dBA, DNL for outdoor common areas within any approved residential use; and
- Interior noise standard of 45 dBA, DNL.

These noise levels shall be attained through use of appropriate building materials as required by state of California Title 24 standards. Compliance with these performance standards shall be verified by an acoustical professional prior to issuance of a building permit. Specific measures to achieve these performance standards shall include all or any combination of the following options:

- Site design measures, including use of building orientation to minimize window exposure toward noise sources, avoid placing balcony areas in high noise areas, and use of buildings as noise barriers.

- Use of acoustically rated building materials (insulation and windows);
- Construction of architectural noise barriers between sources and receptors; and
- Provision of landscaping or other non-noise-sensitive buffer zones between sources and receptors.

MM NOI-4b: Hotel Exposure to Railroad Noise (Program EIR Mitigation Measure 4.J-1b). All hotel projects within the Specific Plan area shall minimize the exposure of people within the Specific Plan area to noise from Caltrain and High-Speed Rail operations through construction of noise barriers or maintenance of buffer distances, and shall adhere to the following noise performance standards:

- Exterior noise level of below 65 dBA, DNL for outdoor common areas within any approved residential use or hotel; and
- Interior noise standard of 45 dBA, DNL.

These noise levels shall be attained through use of appropriate building materials as required by State of California Title 24 standards. Compliance with these performance standards shall be verified by an acoustical professional prior to issuance of a building permit. Specific measures to achieve these performance standards shall include all or any combination of the following options:

- Site design measures, including use of building orientation to minimize window exposure toward noise sources, avoid placing balcony areas in high noise areas, and use of buildings as noise barriers;
- Use of acoustically rated building materials (insulation and windows);
- Construction of architectural noise barriers between sources and receptors; and
- Provision of landscaping or other non-noise-sensitive buffer zones between sources and receptors.

Significance Conclusion for Impact NOI-4 with Implementation of Program EIR Mitigation Measures

Implementation of Mitigation Measures MM NOI-4a and NOI-4b would require residential, hotel, and other uses where people normally sleep to be designed to maintain an interior Day Night Noise Level (DNL) no greater than 45 dBA and outdoor common areas to a 65 dBA DNL., Baylands residents would be adequately protected from noise generated by rail operations within the Caltrain right-of-way. As a result, Baylands development would not exacerbate the

noise impacts of railroad-generated noise by placing noise-sensitive uses close to the Caltrain right-of-way. Impacts would therefore be less than significant with mitigation incorporated.

e. Impact NOI-5: Temporary or Permanent Increase in Vibration

Methodology for Determining Significance

Impacts from groundborne vibration during Baylands construction and operations are assessed using vibration damage threshold criteria expressed in PPV for architectural damage and human annoyance. Equipment or activities that typically generate continuous vibration include, but are not limited to, excavation equipment, static compaction equipment, vibratory pile drivers, pile-extraction equipment, and vibratory compaction equipment.

The Baylands Specific Plan would cause a significant impact on structures if vibration levels caused by Baylands construction or operations would exceed applicable vibration criteria for potential damage to structures presented in **Table 4.12-6** or human annoyance from project-generated vibration sources. For annoyance from construction vibration, a threshold of 72 VdB (0.02 in/sec PPV) is applied for residential uses, consistent with FTA criteria for conditions where there are a frequent (70 or more) number of events per day for Category 2 (residential) land uses.

Vibration impacts were estimated using reference vibration levels for construction equipment in concert with vibration propagation equations published by FTA and estimating the potential for resultant vibration levels that could cause building damage or human annoyance.

Vibration may also affect underground structures and pipelines. The 2004 American Association of State Highway and Transportation Officials (AASHTO) guidelines include references for underground utility criteria, citing studies that indicate vibration under the ground surface is lower than that measured at the ground surface. One major utility has adopted a criterion of 4.0 in/sec (AASHTO 2004). Underground or restrained concrete structures can withstand vibration of 10.0 in/sec before the appearance of threshold cracks. Thus, the former threshold is applied to pipelines (e.g., Kinder Morgan tank farm), while the latter threshold is applied to cables and underground structures.

Impact Assessment

Construction Vibration

This analysis addresses vibration impacts generated by construction activities at existing off-site buildings as well as vibration impacts caused by construction activities at Baylands buildings that would be constructed and occupied while Baylands construction activities remain ongoing.

Icehouse Hill District

While the Specific Plan would establish zoning and development standards for Baylands development and describes the construction phasing, the precise location, design, and timing for construction of individual buildings are not yet known. Based on the geotechnical reports prepared for the western and eastern portions of the Specific Plan area, it is likely that buildings that are 4 stories or more in height could require pile driving. A matrix of vibration from construction activities with distance to vibration-sensitive receptors was, therefore, used to conduct the analysis. This matrix, presented in **Table 4.12-39**, uses dark-shaded areas to indicate the distances at which vibration levels would exceed the significance criterion for conventional structures. The lighter shaded areas indicate the distances at which the criterion for historic structures or buildings that are documented to be structurally weakened would be exceeded. As shown in **Table 4.12-39**, cosmetic damage to a conventionally constructed building could result from pile driving at a distance of 30 feet or closer, and cosmetic damage to a historic building could result from pile driving at a distance of 75 feet or closer as illustrated in **Table 4.12-39**.

Table 4.12-39: Vibration Levels for Construction Activity

Equipment	Estimated Peak Particle Velocity (inches per second)							
	At 25 Feet (reference)	At 30 Feet	At 40 Feet	At 75 Feet	At 135 Feet	At 145 Feet	At 170 Feet	At 340 Feet
Loader	0.0263	0.020	0.013	0.005	0.002	0.002	0.001	0.001
Backhoe	0.028	0.021	0.014	0.005	0.002	0.002	0.002	0.001
Jackhammer	0.035	0.027	0.017	0.007	0.003	0.003	0.002	0.001
Loaded Trucks	0.076	0.058	0.038	0.015	0.006	0.005	0.004	0.002
Large Bulldozer	**0.089**	0.068	0.044	0.017	0.007	0.006	0.005	0.002
Excavators	**0.175**	**0.133**	**0.086**	0.034	0.014	0.013	0.010	0.003
Impact Pile Driver	**0.65**	**0.494**	**0.321**	**0.125**	0.052	0.047	0.037	0.013
Vibratory Pile Driver	**0.65**	**0.494**	**0.321**	**0.125**	0.052	0.047	0.037	0.013

SOURCES: Caltrans, 2020; FTA, 2018; New Hampshire Department of Transportation, 2012.

NOTES:

Dark-shaded bold text indicates distances where vibration levels would exceed the criterion for conventional structures.

Lighter shaded bold text indicates the distances at which the criterion for historic structures or buildings that are documented to be structurally weakened would be exceeded.

There are no historic structures within 200 feet of the Icehouse Hill District. The nearest off-site structure, 3240 Bayshore Boulevard, is approximately 340 feet from the nearest construction area within the Icehouse Hill District. The use of an impact pile driver during construction within this district would generate the highest vibration levels. The 3240 Bayshore Boulevard off-site structure would be exposed to a vibration level of 0.013 in/sec PPV, below the human annoyance (72 VdB or 0.016 in/sec PPV) and building damage threshold (0.5 in/sec PPV).

However, once construction of the first buildings within the Icehouse Hill District is completed, these buildings would be subject to vibration from construction of adjacent buildings and pile

driving, which could be as close as approximately 40 feet to completed buildings. The structures would be exposed to a vibration level of 0.321 in/sec PPV, above the applied human annoyance criterion of 72 VdB (0.016 in/sec PPV) but below the building damage threshold for modern structures of 0.5 in/sec PPV. Therefore, within the Icehouse Hill District, construction-related vibration impacts with respect to building damage would not exceed the applicable threshold but construction-related vibration impacts with respect to human annoyance would.

Roundhouse District

Specific locations where pile driving would be required is speculative; therefore, the matrix of vibration from construction activities with distance to receptors provided in **Table 4.12-39** was used to analyze impacts associated with Roundhouse District construction activities. Based on the existing geotechnical study for the western portion of the Baylands, low-density residential uses with a maximum building height of 50 feet would likely not require pile installation for foundations. High-density residential towers in the Roundhouse District with a maximum height of between 110 feet and 270 feet would, however, likely require pile driving.

Because the historic Roundhouse structure is proposed to be dismantled for future restoration following site grading and then reassembled, it would not be affected by vibration from grading activities. The nearest potential for pile driving to the roundhouse location is 300 feet to the south at the northern boundary of the Icehouse Hill District. Use of the reference vibration level for pile driving of 0.65 in/sec PPV at 25 feet results in a vibration level of 0.02 PPV at the roundhouse location. This predicted vibration level would be below the threshold for historic buildings,[283] which is a maximum of 0.25 PPV.

The nearest off-site structure, 2850 Bayshore Boulevard, is approximately 145 feet from the nearest construction area for the Roundhouse District. An excavator typically generates vibration levels of 0.013 in/sec PPV at a distance of 145 feet (see **Table 4.12-39** above). At this distance, vibration levels are below the applied building damage threshold for the site structure on 2850 Bayshore Boulevard. The structure at 2850 Bayshore Boulevard is an industrial use and would not be considered vibration-sensitive for the purposes of determining human annoyance. The nearest off-site residential use to the Roundhouse District would be residences on McDonald Avenue approximately 530 feet to the northwest. At this distance, vibrations from earth-moving equipment would be reduced to 47 VdB (0.0009 in/sec PPV), which is below the annoyance threshold of 72 VdB (0.016 in/sec PPV).

However, residential buildings within the Roundhouse District would be approximately 30 feet south of the construction of the proposed high-density residential tower, where pile driving could occur. These on-site structures would be exposed to a vibration level of 102 VdB (0.494 in/sec PPV), above the applied human annoyance threshold for residential uses of 72 VdB

[283] Once it is reassembled within Roundhouse Park, the historic Roundhouse building would no longer be extremely fragile.

(0.016 inch/sec PPV) but just below the building damage threshold for modern construction. Therefore, within the Roundhouse District, construction-related vibration impacts with respect to building damage would be less than significant, but construction-related vibration impacts with respect to human annoyance would be significant.

Bayshore District

There are no historic structures within 200 feet of the proposed Bayshore District. The nearest off-site structure, 2650 Bayshore Boulevard, is approximately 135 feet from the nearest construction area for the Bayshore District in an area that would not require pile driving. An excavator typically generates vibration levels of 0.014 in/sec PPV at a distance of 135 feet (see **Table 4.12-39**). At this distance, vibration levels are well below the applied human annoyance threshold for residential uses of 72 VdB (0.016 in/sec PPV) and building damage threshold (0.50 in/sec PPV) for the structure on 2650 Bayshore Boulevard.

Low-density residential uses with a maximum building height of 50 feet within the Bayshore District would not likely require pile installation for foundations. However, pile driving would be required for residential and commercial towers with a maximum height of between 110 feet and 270 feet. Construction of these taller buildings within the Bayshore District, once adjacent residential buildings have been completed and are occupied, is likely to occur. Occupied low-density residential buildings could be as close as approximately 30 feet to tower construction, where pile driving could occur. Such structures would be exposed to a vibration level of 0.494 in/sec PPV, well above the applied human annoyance threshold for residential uses 72 VdB (0.006 in/sec PPV) but just below the building damage threshold for modern construction of 0.5 in/sec PPV. Therefore, within the Bayshore District, project-generated construction-related vibration would not exceed criteria specific to building damage but could exceed the human annoyance criterion.

Underground Utility Installations

Underground utility installation would require cut and fill trenching activities and would occur throughout the western portion of the Baylands and along Bayshore Boulevard. In-ground utility installation would be closest to off-site receptors where it occurs within the right-of-way of Bayshore Boulevard where trenching would be 150 feet from the nearest off-site structures on the other side of this roadway. This distance would be sufficient to ensure that vibration levels from excavation equipment would be reduced to well below building damage thresholds (refer to **Table 4.12-39**).

Additionally, there are a number of underground utilities that currently exist beneath the Baylands, including subsurface pipelines for the Kinder Morgan Tank Farm. Vibrations from construction equipment, including pile driving, could adversely affect existing utility installation within the western portion of the Baylands if they were to occur in very close proximity. Pile driving within 8 feet of an optical fiber cable could exceed the 4.0 in/sec criterion, which would

be a potentially significant impact. Pile driving within 5 feet of underground pipelines or other underground structures could exceed the 10.0 in/sec threshold criterion.

Campus East District

No historic structures are within 200 feet of the Campus East District. The nearest off-site structures would be the Recology and Golden State Lumber buildings, approximately 100 feet from developable areas of the Campus East District. Because of the presence of the capped landfill, it is conservatively assumed that all building development in the Campus East District would require pile driving. The Recology and Golden State Lumber buildings would be exposed to a vibration level of less than 0.013 in/sec PPV, well below the building damage threshold of 0.5 in/sec PPV. These business uses are not considered vibration-sensitive for the purposes of annoyance.

However, on-site construction of the proposed low-density commercial buildings would be less than approximately 25 feet south of the construction of adjacent low-density commercial buildings, where pile driving would occur. Structures could be exposed to vibration levels of more than 0.65 in/sec PPV, above both the applied human annoyance threshold of 72 VdB (0.016 in/sec PPV) and building damage thresholds of 0.5 in/sec PPV. Therefore, within the Campus East District, construction-related vibration would exceed the criteria with respect to building damage as well as to human annoyance.

Operational Vibration

Land uses permitted by the Baylands Specific Plan would not be expected to result in new sources of operational vibration. Operational sources of vibration are generally associated with projects that would implement new rail transit operations, mining, or blasting, and these types of operations are not included in the Specific Plan.

Brisbane Municipal Code 17.30.030 (B)(1) states that all permanent mechanical equipment, such as motors, compressors, pumps, and compactors that could be a source of structural vibration or structure-borne noise, shall be shock-mounted with inertia blocks or bases and/or vibration isolators for newly constructed residential condominiums and residential condominium conversions (including residential units in mixed-use developments).

Significance Conclusion for Impact NOI-5

Temporary, construction-related increases in vibration identified by Impact NOI-5 would be significant and require mitigation. Although existing off-site structures would not experience Baylands-generated vibration exceeding applicable thresholds, building construction in the early increments of Baylands development would be subject to vibration levels above the

applied human annoyance criterion of 72 VdB (0.016 in/sec PPV) or the building damage threshold for modern structures of 0.5 in/sec PPV in the following locations:

- Icehouse Hill District, where pile driving for buildings would expose previously constructed Baylands buildings as close as 40 feet to a vibration level of 0.321 in/sec PPV, above the applied human annoyance criterion of 72 VdB (0.016 in/sec PPV) but below the building damage threshold for modern structures of 0.5 in/sec PPV.
- Roundhouse District, where pile driving would expose previously constructed Baylands buildings as close as 30 feet to a vibration level of 0.494 in/sec PPV, well above the applied human annoyance threshold for residential uses 72 VdB (0.016 in/sec PPV) but just below the building damage threshold for modern construction. Pile driving could occur as close as 300 feet to the reconstructed Roundhouse, which would experience a resultant vibration level of 0.02 PPV. This predicted vibration level would be below the 0.25 in/sec PPV criteria for historic structures.
- Bayshore District, where pile driving would expose previously constructed Baylands buildings as close as 30 feet to a vibration level of 0.494 in/sec PPV, well above the applied human annoyance threshold for residential uses 72 VdB (0.016 in/sec PPV) but just below the building damage threshold for modern construction of 0.50 in/sec PPV.
- Campus East District, where pile driving would expose previously constructed Baylands buildings as close as 25 feet south of the construction of low-density commercial buildings to a vibration level of more than 0.65 in/sec PPV, well above both the applied human annoyance threshold of 72 VdB (0.016 in/sec PPV) and the building damage threshold of 0.50 in/sec PPV.
- Pile driving activities within 8 feet of Kinder Morgan pipelines would generate sufficient vibration to damage the pipeline. Pile driving within 5 feet of underground pipelines or other underground structures could exceed the 10.0 in/sec PPV criterion.

Program EIR Mitigation Measures

MM NOI-5a: Pre-Construction Assessment to Minimize Structural Pile-Driving Vibration Impacts on Adjacent Historic Buildings and Structures and Vibration Monitoring (Program EIR Mitigation Measure 4.J-2b). Any development within 85 feet of the Roundhouse and the Machinery & Equipment Building that would require pile driving or other construction techniques that could result in vibrations of 0.25 in/sec shall engage a qualified geotechnical engineer subject to City approval to conduct a pre-construction assessment of existing subsurface conditions and the structural integrity of the nearby historic structures subject to piledriving or other vibration-inducing activity before a building permit is issued to demonstrate that the proposed construction activities would not result in

vibration-induced damage to the Roundhouse or the Machinery & Equipment building.

If recommended by the pre-construction assessment, groundborne vibration monitoring of nearby historic structures shall be required. Such methods and technologies shall be based on the specific conditions at the construction site such as, but not limited to, the pre-construction surveying of potentially affected historic structures and underpinning of foundations of potentially affected structures, as necessary. The pre-construction assessment shall include a monitoring program to detect ground settlement or lateral movement of structures in the vicinity of pile-driving activities. Monitoring shall be maintained while construction occurs within 85 feet of historic structures, and results shall be submitted to the City Engineer. In the event of unacceptable ground with the potential to cause structural damage movement (in excess of 0.25 in/sec PPV at historic structures), as determined by the City Engineer, all impact work shall cease until corrective measures (e.g., installation of vibration wave barriers) are implemented to reduce ground movement to below 0.25 inches PPV.

In addition, the following measure shall be implemented:

- Evaluate and implement feasible measures for reducing vibration, such as alternative pile driving methods (e.g., cast-in-drilled-hole piles versus driven piles), alternative foundation types for the new construction (e.g., spread footings versus driven piles), alternative compaction methods, and physical measures (intervening trench, increased distance).
- Require monitoring to be conducted at the building during construction. This monitoring can include crack gages on existing cracks and vibration amplitude monitoring. Establish warning and stop work thresholds for monitoring. Implement visual and audible signals that are triggered by a vibration monitor when exceedances of warning and stop work thresholds occur. If warning thresholds are exceeded routinely, consider alternative construction approaches.
- If the stop work threshold is exceeded, evaluate the condition of the building for damage. If no damage is indicated, consult with structural engineer and/or architectural historian to assess whether higher thresholds are possible and adjust as appropriate.
- If damage occurs, determine if any other construction approaches are feasible to reduce vibration. If none is available, examine the severity of the damage to determine if damage is minor and repair is feasible. If repair is feasible, continue with construction but monitor vibration and

damage closely to ensure that damage remains repairable. Consider whether a lower stop work threshold is feasible.

- Repair any damage that has occurred.

MM NOI-5b: Protection of Underground Utilities (Program EIR Mitigation Measure 4.J-2c). All development sites requiring pile driving shall have underground utility[284] surveys completed before an application for a building permit is submitted to demonstrate that pile driving will be located a minimum of 15 feet from buried utilities. All pile driving shall be designed so as to result in peak particle velocity of less than 4.0 in/sec (100 mm/s) at the location of underground utilities.

Within one week following completion of pile driving activities, a post-construction assessment of all underground utilities within 30 feet of the pile driving activity shall be submitted to the City by the contractor, confirming that no damage to any underground utilities occurred as a result of the pile driving activity. Should the post-construction assessment determine that underground utilities were damaged by pile driving activities, such damage shall be repaired by the contractor to the satisfaction of the City and affected utility.

Significance Conclusion for Impact NOI-5 with Implementation of Program EIR Mitigation Measures

Implementation of Mitigation Measures MM NOI-5a and MM NOI-5b would reduce impacts related to building damage to the Roundhouse or the Machinery & Equipment building and historic structures to a less-than-significant level by requiring preconstruction surveys, monitoring, and provisions for repairing damage.

Residual impacts with respect to human annoyance would remain significant even with implementation of Mitigation Measures MM NOI-5a and MM NOI-5b and would require additional mitigation measures.

Additional Mitigation Measure

MM NOI-5c: Vibration Control. Any impact pile driving that is permitted per Mitigation Measure MM NOI-1f after having demonstrated via a site-specific geotechnical study along with any test borings that geologic or other unique conditions preclude the use of quieter, alternative pile installation techniques shall be subject to the following requirements.

[284] Underground utilities include electrical lines, irrigation lines, reclaimed water lines, municipal water lines, sewer lines, gravity flow facilities (storm, sanitary, and laterals), cable/ communication lines, and gas lines.

Each site-specific development and infrastructure project that would occur within 75 feet of a conventionally constructed building shall implement sufficient measures so as to ensure vibration from impact or vibratory pile driving would not exceed 0.5 in/sec PPV at the nearest structure or 72 VdB (0.016 in/sec PPV) at the nearest occupied residential structure.

Prior to the issuance of a building permit or construction permit, the applicant shall prepare a Construction Vibration Avoidance and Reduction Plan to identify the specific measures to be implemented to achieve the above performance standard. The plan shall be submitted to the Community Development Director for review and approval, and include, at a minimum, the following vibration avoidance and reduction measures:

- Neighbors within 500 feet of the construction site shall be notified of the construction schedule and that noticeable vibration levels could result from pile driving.
- Vibration levels and/or impacts from pile driving shall be minimized by instituting as many of the following measures as necessary to reduce the potential impacts from pile driving to meet the performance standards identified above:
    - Tower buildings requiring pile driving shall be constructed during the initial phases of construction for a given neighborhood to avoid annoyance vibration impacts on other occupied residential buildings within the neighborhood.
    - Foundation pile holes shall be pre-drilled to minimize the number of impacts required to seat the pile.
    - Piles shall be jetted or partially jetted into place to minimize the number of impacts required to seat the piles.
- The pre-construction survey of underground utility lines required by Mitigation Measure MM NOI-5b shall be conducted within a radius of 100 feet of the construction site. All pile installation locations shall be located no closer than 8 feet to existing utility easements containing underground cables, pipelines, or fuel lines associated with the Kinder Morgan Tank Farm.

Additionally, construction vibration monitoring shall be implemented to document conditions before, during, and after pile driving within 30 feet of a modern structure, within 50 feet of a historic structure, or within 8 feet of a utility line right-of-way or easement. All monitoring tasks shall be undertaken under the direction of a licensed Professional Structural Engineer in the State of

California (and a Historic Architect if the affected structures are historic resources) and shall be in accordance with industry-accepted standard methods. Construction vibration monitoring shall include the following tasks:

- Identify the sensitivity of nearby structures to groundborne vibration. Perform a pre-construction photo survey, elevation survey, and crack monitoring survey for each of these structures. Surveys shall be performed before any pile driving activity, at regular intervals during pile driving, and after completion. The surveys shall include internal and external crack monitoring in structures, settlement, and distress, and shall document the condition of foundations, walls, and other structural elements in the interior and exterior of the structures.
- Develop a Contingency Plan. The plan shall identify structures where monitoring will be conducted, establish a vibration monitoring schedule, define structure-specific vibration limits, and address the need to conduct photo, elevation, and crack surveys to document conditions before and after pile driving.
- Should monitored vibration levels reach 0.47[285] in/sec PPV at buildings of conventional construction or 0.22 in/sec PPV at historic buildings, alternative construction techniques shall be used to minimize vibration levels during repaving activities where needed to meet vibration criteria. Such alternative construction techniques include, but are not limited to, use of non-vibratory, excavator-mounted compaction wheels and small smooth drum rollers for final compaction of asphalt base and asphalt concrete, if within 50 feet of a historic structure or 25 feet of a conventionally constructed structure. If needed to meet compaction requirements, smaller vibratory rollers may also be used.
- If vibration levels reach 0.47 in/sec PPV at buildings of conventional construction or 0.22 in/sec PPV at historic buildings, suspend construction and implement alternative construction methods to either lower vibration levels or secure the affected structures.
- Conduct a post-construction survey on structures where either monitoring has indicated high levels or complaints have been received regarding damage. Where damage has resulted from construction activities, make appropriate repairs or provide compensation.
- Within one month after substantial completion of any building constructed with impact pile driving, summarize the results of all

[285] Identified trigger levels for cease-work reflect a vibration level 0.03 in/sec below the damage criteria.

vibration monitoring in a report and submit the report for review by the Community Development Director or the Director's designee. The report shall describe measurement methods and equipment used, present calibration certificates, and include graphics as required to clearly identify the locations of vibration monitoring. An explanation of all events that exceeded vibration limits shall be included together with proper documentation supporting any such claims.

- Designate a person responsible for registering and investigating claims of excessive vibration. The contact information for such a person shall be clearly posted on the construction site.

Significance Conclusion for Impact NOI-5 with Implementation of All Mitigation Measures

Mitigation Measure MM NOI-5a would reduce significant impacts related to building damage to the Roundhouse or the Machinery & Equipment building and historic structures to a less-than-significant level by requiring preconstruction surveys, monitoring, and provisions for repairing damage. Mitigation Measure MM NOI-5b would reduce significant impacts related to underground utilities by requiring underground utility[286] surveys and a post-pile driving assessment.

Mitigation Measure NOI-5c addresses residual impacts associated with potential damage to non-historic structures and human annoyance impacts. This measure would require the preparation and implementation of a Master Construction Vibration Avoidance and Reduction Plan that would ensure vibration levels from impact or vibratory pile driving within the Baylands would not exceed the following standards:

- 72 VdB (0.02 in/sec PPV) at the nearest occupied housing, which is the applied human annoyance threshold for residential uses; or
- 0.5 in/sec PPV) at the nearest occupied structure, which represents the building damage threshold for modern construction.

Thus, impacts would be less than significant with mitigation incorporated.

[286] Underground utilities include electrical lines, irrigation lines, reclaimed water lines, municipal water lines, sewer lines, gravity flow facilities (storm, sanitary and laterals), cable/communication lines, and gas lines.

f. Impact NOI-6: Exposure of People to High Vibration Levels

Methodology for Determining Significance

Consistent with CEQA Guidelines Section 15126.2(a), in addition to addressing changes in the physical environmental that a project would cause, Impact NOI-6 analyzes the potential for causing "significant environmental effects the project might cause or risk exacerbating by bringing development and people into the area affected." Thus, the analysis undertaken for Threshold NOI-6 reflects the example provided in CEQA Guidelines Section 15126.2(a) and evaluates whether Baylands development would exacerbate the impacts of rail operations by exposing residents and hotel guests to vibration levels in excess of 72 VdB, as defined in federal standards established by the U.S. Department of Transportation, Federal Transit Administration, and Caltrans.

Impact Assessment

Because the Specific Plan area is bisected by the Caltrain commuter rail tracks, Baylands development would result in the exposure of people to vibrations from Caltrain rail operations. As of September 2024, Caltrain operates as many as 101 trains each weekday. Because Caltrain pass-by events occur more than 70 times daily, the more stringent threshold of 72 VdB rather than the 80 VdB threshold is applied. The FTA identifies screening buffer distances in its document, *Transit Noise and Vibration Impact Assessment*. Specifically, for commuter rail lines, buffer distances of 200 feet from the right-of-way are recommended for residences or any land uses where people sleep, such as hotels and hospitals, to avoid vibration impacts. For institutional land uses, such as schools and churches, the recommended buffer distance to avoid vibration impacts is 120 feet from the right-of-way.

The Final EIR/EIS for the High-Speed Rail San Francisco to San Jose Project Section states that typical existing vibration levels from train pass-by events between San Francisco and South San Francisco varies from 74 VdB (at 25 feet) to 48 VdB (at 240 feet), depending on the location of the measurement and distance to the rail alignment (CHSRA, 2019). Based on these vibration values, the potential would exist for high density residential towers within the Bayshore and Roundhouse Districts and hotel uses within the high-density commercial building in the Bayshore District to be exposed to vibration levels in excess of 72 VdB.

Significance Conclusion for Impact NOI-6

Development of housing and hotel uses proposed for the tower buildings in the Bayshore and Roundhouse Districts within 50 feet of the Caltrain rail line would exacerbate the vibration impacts of Caltrain and other rail operations by exposing on-site residents and hotel guests to more than 70 rail operations generating 72 VdB or more. This would constitute a significant impact.

Program EIR Mitigation Measures

MM NOI-6: Exposure to Vibration from Rail Operations (Program EIR Mitigation Measure 4.J-2a). All development in the Baylands shall be designed to avoid vibration from Caltrain and other rail operations in excess of 72 VdB. Prior to issuance of any building permit for residential or hotel structures intended for human occupancy within 200 feet of the mainline track, a detailed vibration design study shall be completed by a qualified acoustical engineer to confirm ground vibration levels and frequency of operations along the Caltrain rail line and determine appropriate design that would limit interior vibration levels to less than 72 VdB within residences and hotel rooms. Implementation of the recommended measures of the acoustical study into project design elements shall be verified by the Brisbane Building Department as part of the plan-check process.

Specific measures to achieve the performance standard set forth above shall include all or any combination of the following methods:

- Use of vibration isolation techniques, such as supporting the new building foundations on elastomer pads similar to bridge bearing pads;
- Installation of vibration wave barriers. Wave barriers would consist of control trenches or sheet piles, which are analogous to controlling noise with a sound barrier. The applicability of this technique depends on the characteristics of the vibration waves.

Significance Conclusion for Impact NOI-6 with Implementation of Program EIR Mitigation Measures

Implementation of Mitigation Measure MM NOI-6 would ensure that groundborne vibration from rail operations would be less than the applicable threshold and thereby avoid exacerbating vibration impacts from rail operations on Baylands residential and hotel uses. Impact NOI-6 would therefore be less than significant with mitigation incorporated.

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4.13 HAZARDS AND HAZARDOUS MATERIALS

4.13.1 INTRODUCTION

a. Overview

This section addresses the routine use, handling, processing, transportation, and disposal of hazardous materials associated with the 2025 Specific Plan project. It also addresses the potential for upset and accidents in which hazardous materials could be released into the environment, both during site and infrastructure construction, as well as subsequent long-term operational use of the Baylands. The potential for aviation-related hazards and emergency response/access issues associated with Specific Plan development are also addressed.

The two primary historic industrial uses of the Baylands—the former railyard and the former Brisbane Landfill—left contaminants classified as hazardous waste in the site's soil and groundwater. This contamination has been the subject of longstanding remediation and final landfill closure planning efforts, culminating in State of California regulatory agency approvals of Feasibility Studies/Remedial Action Plans (FS/RAPs) for the western portion of the Baylands in 2022 and approval of a Closure and Post-Closure Maintenance Plan (landfill closure plan or Title 27 landfill closure plan) for the former Brisbane Landfill within the eastern portion of the Baylands by the Regional Water Quality Control Board (RWQCB) and San Mateo County Environmental Health Services. Because these FS/RAPs and the landfill closure plan have undergone environmental review and been approved by the appropriate State and regional regulatory agencies, site remediation and landfill closure activities are not part of the Specific Plan project and are not analyzed in this EIR.

Regulatory Authority for Baylands Site Remediation and Final Landfill Closure

Site remediation and Title 27 final landfill closure will be undertaken pursuant to the regulatory oversight of the Department of Toxic Substance Control (DTSC), San Francisco Regional Water Quality Control Board (RWQCB), and San Mateo County Environmental Health Services as the local enforcement agency for landfill closure.

As a result, site remediation and landfill closure activities undertaken pursuant to the regulatory oversight of state and regional agencies that are prerequisites to Baylands development are not part of the 2025 Specific Plan project and are not analyzed in this EIR.

However, site grading activities subject to a City grading permit that would result in building pads for Specific Plan development are part of the Specific Plan project and are analyzed in this EIR.

In addition, Brisbane General Plan policy requires site remediation and landfill closure to be undertaken pursuant to the regulatory oversight of state and regional agencies prior to development permitted by the Specific Plan. Finally, remediation of the existing chlorinated volatile organic compounds (CVOC) groundwater plume within the Baylands is being addressed as part of the Schlage Operating Unit in San Francisco, which has undergone environmental review and been approved by the RWQCB.

While this EIR does not evaluate the impacts of site remediation and landfill closure activities that are subject to the oversite of state and regional regulatory authority, it does evaluate the physical environmental effects of site grading conducted pursuant to City of Brisbane grading permits that create building pads for Baylands development.

Impacts related to hazardous or toxic air emissions such as vehicle use (diesel particulate emissions from exhaust) and proximity to existing or relocated sources of diesel or other toxic air emissions are addressed in Section 4.9, *Air Quality*. Flood hazards are addressed in Section 4.14, *Hydrology and Water Quality*. Seismic and geologic hazards, such as earthquakes and liquefaction, are addressed in Section 4.15, *Geology, Soils, and Seismicity*. Fire hazards are addressed in Section 4.19, *Wildland Fire Hazards*.

b. Definitions

Airport Influence Area encompasses the area that is flown by an aircraft to or from an airport at an altitude of 10,000 feet or less above mean sea level a minimum of once each week. Unless otherwise specified, "Airport Influence Area" refers to the Airport Influence Area of San Francisco International Airport (SFO).

Airport Land Use Commission, unless specified otherwise, refers to the City/County Association of Governments of San Mateo County (C/CAG) Board of Directors, acting in its capacity as the Airport Land Use Commission for San Mateo County.

Airspace protection surfaces refer to the imaginary surfaces in the airspace surrounding airports that define maximum building heights needed to provide safety from physical interference for aircraft taking off or landing at an airport. Airport Protection Surfaces are defined for an airport in accordance with criteria set forth in 14 Code of Federal Regulations Part 77, Subpart C, and FAA Order 8260.3B, U.S. Standard for Terminal Instrument Procedures (TERPS). They also include imaginary surfaces reflecting the one-engine-inoperative climb procedures of commercial aircraft operators at the Airport, developed in accordance with the requirements of 14 Code of Federal Regulations Part 121 and other applicable federal regulations.

Constituent of concern, chemical of concern, or **contaminant of concern** is a hazardous material that has the potential to cause damage to human health or the environment and create a "risk" to human health and the environment.

Exposure pathway is the course a chemical or pollutant takes from the source to the organism exposed. A "complete" exposure pathway consists of four elements: chemical sources, migration routes (i.e., transport in the environment), an exposure point for contact (i.e., soil, air, or water), and exposure routes.

Exposure route is the way a chemical or pollutant enters the organism after contact. Four exposure routes are recognized in risk evaluation methods: ingestion, inhalation, dermal (skin and eye), and injection.

Extremely hazardous substance, in the context of Public Resources Code Section 21151.4 pertaining to hazardous materials emissions near schools, refers to a material included on lists compiled pursuant to Section 25532 of the California Health and Safety Code, which incorporates regulated toxic and flammable substances under Section 112(r) of the federal Clean Air Act. Table 3 of Section 112(r) lists those regulated substances pursuant to Section 25532(g)(2) of the California Health and Safety Code.

Hazard includes any condition, practice, or procedure that is or may be dangerous, harmful, or perilous to employees, property, neighbors, or the general public.

Hazardous material refers to any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. Hazardous materials include, but are not limited to, hazardous substances, hazardous waste, and any material that a handler or an administering agency has a reasonable basis for believing would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment (California Health and Safety Code, Section 25501).

Hazardous materials release site refers to any area, location, or facility where a hazardous material has been released or threatens to be released to the environment.

Hazardous waste refers to any waste substance that, because of its quantity, concentration, or physical, chemical, or infectious characteristics, may either cause or significantly contribute to an increase in mortality or an increase in serious illness, or pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed (California Health and Safety Code, Section 25117).

Real estate disclosure refers to a written statement that notifies a prospective purchaser of real estate, prior to completion of the purchase, of the potential annoyances or inconveniences associated with airport operations. Typically, a real estate disclosure is provided at the real estate sales or leasing offices. Real estate disclosure is required by state law as a condition of the sale of most residential property if the property is located in the vicinity of an airport and is within its Airport Influence Area (see Bus. & Prof. Code, §11010; Civ. Code, §§1102.6, 1103.4, 1353). State law does not require the real estate disclosure to be recorded in the chain of title for the affected property.

Recognized environmental concerns are defined as the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property (1) due to any release to the

environment, (2) under conditions indicative of a release to the environment, or (3) under conditions that pose a material threat of a future release to the environment.[287]

Remedial action or **remediation** refers to actions required by federal, state, or local laws, ordinances, or regulations necessary to prevent, minimize, or mitigate damage that may result from the release or threatened release of a hazardous material. These actions include site cleanup; monitoring, testing, and analysis of site conditions; site operation and maintenance; and placement of conditions or restrictions on the land use of a site upon completion of remedial actions.

Risk is determined by the probability of exposure to a hazardous material or a hazardous condition and the severity of harm such exposure would pose. Accordingly, the likelihood and means of exposure, in addition to the inherent toxicity of a material or damage that could be caused by a hazardous condition, are used to determine the degree of risk to human health or the environment.

Title 27 Landfill Closure, Final Landfill Closure refers to the performance standards set forth in Title 27 of the Code of California Regulations, Sections 20950 through 21200 for the formal closure of landfills within California once waste disposal activities cease. These performance standards address final cover requirements, grading and drainage, post-closure maintenance duties, and related requirements.

4.13.2 PHYSICAL ENVIRONMENTAL SETTING

a. Baseline

Although spring 2023 is generally used in this EIR to describe existing conditions, completion of site remediation and landfill closure activities subject to the regulatory oversight of state and regional regulatory agencies that have received environmental review and been approved by those regulatory agencies are included in the baseline for analysis of hazards and hazardous materials. However, because site grading is subject to a City grading permit to move soil from the eastern to the western portion of the Baylands to create building pads for Baylands development, it is not included in the baseline for hazards and hazardous materials and analyzed as part of the 2025 Specific Plan project.

[287] As per American Society for Testing and Materials (ASTM) Standard Practice E 1527-13.

b. Hazards and Hazardous Materials Conditions

Whether a person exposed to a hazardous substance would suffer adverse health effects depends upon a complex interaction of factors, including:

- The exposure pathway (the route by which a hazardous material enters the body);
- The amount of material to which the person is exposed;
- The physical form (e.g., liquid, vapor) and characteristics (e.g., toxicity) of the material;
- The frequency and duration of exposure; and
- The individual's unique biological characteristics such as age, weight, and general health.

Adverse health effects from exposure to hazardous materials may be short-term (acute) or long-term (chronic). Acute effects can include damage to organs or systems in the body and possibly death. Chronic effects, which may result from long-term exposure to a hazardous material, can also include organ or systemic damage, but chronic effects of particular concern include birth defects, genetic damage, and cancer.

Types of Hazardous Materials Found within Baylands Specific Plan Area

The potential for exposure to hazardous materials within the Baylands from existing conditions includes:

- Underlying contamination of the soil, air, and groundwater from historic railyard and landfill uses; and
- Existing off-site hazardous sites.

The primary types of contaminants found within the Specific Plan area include the following:

- **Leachate:** Leachate is defined as liquid that has come into contact with solid waste, carrying dissolved or suspended materials. Leachate can be either liquid that is generated as part of the decomposition of the waste or liquid that has percolated into the waste from external sources (e.g., surface drainage, rainfall, or groundwater). The quantity of leachate generated at a landfill is a direct function of the amount of water entering the landfill from external sources.
- **Landfill Gas (LFG)**: Decomposition of organic waste under anaerobic conditions (without the presence of oxygen) results in landfill gas (LFG) generation.
- **Volatile Organic Compounds:** Volatile organic compounds (VOCs) are organic chemicals that have a high vapor pressure under ordinary, room temperature conditions. VOCs are numerous, varied, and ubiquitous. They include both human-

made and naturally occurring chemical compounds. Some VOCs are dangerous to human health or cause harm to the environment. Harmful VOCs are typically not acutely toxic but instead have compounding long-term health effects. Concentrations of VOCs are usually low, and symptoms are slow to develop.

- **Metals:** As the result of past industrial operations, various metals can be found in on-site soils, including primarily arsenic, lead, and chromium.
    - **Arsenic** is common in semiconductor electronic devices. The main use of metallic arsenic is for strengthening alloys of copper and especially lead (as in car batteries). Arsenic and its compounds are also used in the production of pesticides, treated wood products, herbicides, and insecticides, although these applications are declining. Arsenic is highly poisonous.
    - **Lead** is a soft and malleable metal, used in building construction; lead-acid batteries; bullets and shot; weights; as part of solders, pewters, and fusible alloys; and as a radiation shield. Lead is a poisonous substance that damages the nervous system and causes brain and nervous system disorders. Excessive lead also causes blood disorders in mammals. Lead is a neurotoxin that accumulates both in soft tissues and the bones.
    - **Chromium** is a steely-gray, lustrous, hard, and brittle metal, which is odorless and tasteless. Metallic chromium is used in the steelmaking process to form stainless steel, adding high resistance to corrosion and discoloration, along with chrome plating. Because chromium compounds were also used in dyes and paints and the tanning of leather, these compounds are often found in soil and groundwater at abandoned industrial sites. Primer paint containing hexavalent chromium is still widely used for aerospace and automobile refinishing applications.
- **Bunker C Fuel:** Bunker fuel is technically any type of fuel oil used aboard ships or trains. It gets its name from the containers in which it is stored on ships and in ports. Bunker C fuel oil is a high-viscosity residual oil that requires pre-heating before the oil can be pumped from a bunker tank. “Residual” refers to the material remaining after the more valuable cuts of crude oil have boiled off. The residue used for Bunker C fuel may contain various undesirable impurities including 2 percent water and one-half percent mineral soil.
- **Polychlorinated Biphenyls (PCBs):** PCBs are petroleum-based oils that were formerly used primarily as insulators in many types of electrical equipment, including transformers and capacitors. After PCBs were determined to be carcinogenic in the mid to late 1970s, the USEPA banned PCB use in most new equipment and began a program to phase out certain existing PCB-containing equipment. Fluorescent lighting ballasts manufactured after January 1, 1978, for example, do not contain PCBs and are required to have a label clearly stating that PCBs are not present in the unit.

c. Existing Contamination and Assessments within the Specific Plan Area

The Baylands contains two primary areas where past hazardous materials releases have occurred: the former Brisbane Landfill and the former Brisbane Railyard, which was used as a railroad switching and maintenance yard from 1911 to 1982. For regulatory purposes, the former railyard was divided into two "operable units" (see **Figure 4.13-1**), recognizing differences in the type of contamination present and the different regulatory agencies responsible for overseeing site remediation.

- The 35-acre northern portion of the Baylands west of the Caltrain right-of-way is within the San Mateo County portion of the Universal Paragon Corporation Operable Unit (OU-SM).[288] OU-SM is subject to the regulatory authority of the California Department of Toxic Substances Control (DTSC).
- The 130-acre southerly portion of the Baylands west of the Caltrain right-of-way is within Operable Unit OU-2 (OU-2). OU-2 is subject to the regulatory authority of the San Francisco Bay RWQCB.

Final landfill closure for the former Brisbane Landfill is subject to the regulatory authority of the RWQCB and San Mateo County Health as the former landfill's Local Enforcement Agency (LEA).

General Plan Policy BL.1 A requires activities related to site remediation within OU-SM and OU-2, as well as Title 27 landfill closure, to be undertaken pursuant to the regulatory authority of the RWQCB and DTSC as a prerequisite to Baylands development.

San Mateo County Portion of the Universal Paragon Corporation Operable Unit (OU-SM)

The 35-acre OU-SM site is currently vacant with various foundations and building slabs remaining. It lies at the base of the Visitacion Valley between Candlestick Point to the north and Visitacion Point to the south. OU-SM is situated on a low-lying flatland that was formed by filling of the area and railroad construction in the early 1900s. The site is nearly flat with a gentle slope to the east, toward San Francisco Bay (Geosyntec 2021a).

Historical Use Summary

The OU-SM site was acquired by the Southern Pacific Railroad (SPRR) in 1896. Prior to SPRR acquiring the property, fill had been added to the San Francisco tidal flats to extend the buildable land surface. Landfilling operations continued following SPRR acquisition and are thought to have consisted of general soil material, refuse, and rock blasted from a nearby roadcut through Visitacion Point as well as rubble and wreckage from the 1906 San Francisco earthquake and fire.

[288] This operable unit was formerly designated as "Operable Unit – 1 (OU-1)."

Figure 4.13-1: Agency Regulatory Responsibilities for Baylands Site Remediation and Landfill Closure

By 1914, sufficient material was imported to the site to lay the foundation for SPRR railroad operations, which began that year. By 1935, fill was placed on most of the area between what is now Bayshore Boulevard and Tunnel Avenue (Geosyntec 2021a). SPRR operated the former Brisbane Railyard from approximately 1911 through 1982 and its major railroad operations resulted in the construction of numerous railroad facilities, including the railroad switching yard.

Several historical facilities with operations that could have affected soil and groundwater quality were located within the UPC OU-SM site, including:

- A passenger coach car repair shop in the southwest portion of the site;
- A freight car repair shop plus nearby paint shop, forge, and blacksmith shop in the western portion of the site;
- A paint storage house in the southern portion of the site;
- A former lumber shed in the center of the site;
- A wheel press;
- A planing mill;
- The former Unit #1 Oil Trap located on the western boundary of the site; and
- The former Unit #2 Sludge Traps located in the northwest portion of the site (Geosyntec 2021a).

Chemicals that may have been used or generated as waste at these facilities include metals, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), and petroleum hydrocarbons, including gasoline-range hydrocarbons (TPH-g), diesel-range hydrocarbons (TPH-d), and polynuclear aromatic hydrocarbons (PAHs). Site-wide, organochlorine pesticides (OCPs) may have been used. Radionuclides are not suspected of being present in site soil at concentrations exceeding regional background concentrations based on the site history detailed above (Geosyntec 2021a).

In 1985, DTSC (formerly the California Department of Health Services, Toxic Substances Control Division), determined that "There has been a release of hazardous substances on, or into the land on the Southern Pacific Bayshore Yard site located east of the intersection of Bayshore Boulevard and Geneva Road, Brisbane." Therefore, DTSC issued the "Order to Post and Fence" that required SPTC "… to post the site with signs and enclose portions of the site with fences …" (DTSC 1985).

Groundwater Quality and Use

Groundwater at the OU-SM site is not used for domestic or industrial purposes. In 2019, the State Water Resources Control Board issued a determination acknowledging that groundwater in the fill, to a depth of approximately 15 feet below ground surface, meets exceptions (a) and

(c) of State Water Resources Control Board Resolution No. 88-63 (i.e., total dissolved solids concentrations and well yield, respectively) and is not likely to be used as a source of drinking water (SFBRWQCB 2019b, as cited in Geosyntec 2021a). Groundwater in the Colma and Merced formations beneath the site is not considered a potential municipal supply under the San Francisco Bay Basin (Region 2) Water Quality Control Plan (Basin Plan).

The groundwater quality of the fill at OU-SM is affected by already impacted groundwater flowing onto the site from the Schlage OU and Zone A groundwater at the landfill (located east of OU-SM). Fill zone groundwater is characterized as having high total dissolved solids (TDS) because the original land surface at the site was submerged under the saline waters of San Francisco Bay. In the early to mid-1900s (ending in 1935), fill was placed in the Bay to create the current land surface. The placement of fill entrapped the saline bay water, which strongly influences the quality of the groundwater in the fill zone. Specifically, the quality of groundwater considered for potential use as municipal or domestic water supply must not exceed a TDS concentration of 3,000 milligrams per liter (mg/L) or an electrical conductivity of 5,000 microsiemens per centimeter (µS/cm) pursuant to the Basin Plan. Historically, several monitoring wells screened in the fill have exhibited electrical conductivity values exceeding those requirements (Geosyntec 2021a).

Wells screened in the deeper water-bearing units, the Colma and Merced formations, do not exhibit high electrical conductivity values and are likely capable of producing 200 gallons per day. These water-bearing units, which are recharged from below and from upgradient sediments to the west, are protected from the poor water quality in the fill by the Young Bay Mud aquitard and upward potentiometric gradients between the Colma Formation and the fill (Geosyntec 2021a).

Previous Environmental Investigations and Site Remediation

Numerous environmental investigations have been conducted at the OU-SM site since 1984 to characterize the distribution of contaminants resulting from historical railroad operations and a contaminant plume from the adjacent Schlage Lock site (Schlage OU). As described above, investigations have identified the presence of metals (primarily arsenic, lead, and mercury), polynuclear aromatic hydrocarbons (PAHs), organochlorine pesticides (OCPs), polychlorinated biphenyls (PCBs), chlorinated volatile organic compounds (CVOCs), and petroleum hydrocarbons, including gasoline-range hydrocarbons (TPH-g) and diesel-range hydrocarbons (TPH-d) (Geosyntec 2021a). Most recently, a data gap investigation was completed in 2018. The data generated by remedial investigations were deemed sufficient by DTSC for updating the Human Health Risk Assessment (HHRA) and completing a FS/RAP for UPC OU-SM. Both documents have been reviewed and approved by DTSC (BKF 2023). The FS/RAP is discussed in detail above in Section 2.7.2.

Site remediation completed to date includes the safe removal of hydrocarbon-impacted soil from the northwest portion of the OU-SM site. In addition, a groundwater extraction and

treatment system operated in the northern portion of the site from 1995 to 2008 to address CVOC contaminants that had migrated from the Schlage OU. Currently, the contaminated groundwater is being addressed as documented in the Schlage OU FS/RAP (Geosyntec 2021a)

Contaminants of Concern

In the absence of any additional remediation or mitigation efforts, the primary risk-driving contaminants of concern identified in the HRA are as follows:

- Soil: arsenic, lead, mercury, carcinogenic PAHs, naphthalene, TPH-d, and Aroclor-1260;
- Soil vapor: CVOCs (1,1-dichloroethene; cis-1,2-dichloroethene; trans-1,2-dichloroethene; tetrachloroethene; trichloroethene; and vinyl chloride); and
- Groundwater: CVOCs (1,1-dichloroethene; cis-1,2-dichloroethene; trans-1,2-dichloroethane; tetrachloroethene; trichloroethene; and vinyl chloride) (Geosyntec 2021a).

The potential exposure pathways to these risk-driving COCs are direct exposures (incidental ingestion, dermal contact, and inhalation of particulates in ambient air) with COCs in soil, and potential inhalation of VOCs in indoor air migrating from soil and shallow groundwater (Geosyntec 2021a).

Contaminant Distribution

SOIL

Historical environmental investigations, including the 2018 Data Gap Investigation, indicated the presence of metals and PAHs in shallow fill soil at elevated concentrations in some areas of the OU-SM site. Arsenic and lead were detected most frequently at relatively elevated concentrations in shallow fill soil, likely resulting from the historical application of lead arsenate pesticide as part of railyard activities (BKF 2023).

OCPs and PCBs were detected at only a few locations, indicating that impacts on soil are localized at the site. CVOCs were detected at only a few locations at low concentrations in soil samples and their distribution in groundwater is indicative of impacts from the adjacent Schlage OU rather than point sources within UPC OU-SM. TPH-g was detected only at low concentrations, and concentrations of TPH-d were elevated only at a few locations, again indicating that impacts on the subsurface are localized at the site. Asbestos was not detected in any soil samples (BKF 2023).

GROUNDWATER

Historical environmental investigations, including the 2018 Data Gap Investigation, indicated that groundwater and soil vapor are impacted by residual levels of CVOCs emanating from the off-site Schlage OU. CVOC concentrations in groundwater and soil are highest in the northern portion of UPC OU-SM. Dissolved metals concentrations in groundwater were generally low with localized elevated concentrations (BKF 2023).

Baseline Health Risk Assessment

A Baseline Health Risk Assessment (HRA) for OU-SM was prepared under the assumption that no remediation or mitigation would be implemented. Using this assumption, the HRA evaluated potential risks to current and future populations that could be exposed to chemicals at the site so that measures could be implemented to address risks appropriately. The results of the HRA found that present site conditions are protective for current populations (i.e., site visitors, commercial/industrial workers at neighboring facilities, and residents of adjacent neighborhoods) but future action to remediate or mitigate potential exposure to contaminants of concern (COCs) in soil and soil vapor are warranted to protect future commercial/industrial workers, construction workers, and residents at the site under a high-intensity, mixed-use redevelopment scenario (Geosyntec 2021a).

Feasibility Study/Remedial Action Plan

The FS/RAP has been reviewed and was approved by DTSC in October 2021 and is discussed in detail above in Section 2.7.2, *Site Remediation*. General Plan Policy BL.1 A requires activities related to site remediation within OU-SM to be undertaken pursuant to the regulatory authority of DTSC as a prerequisite to Baylands development.

Operable Unit OU-2 (OU-2)

A 1990 Imminent and/or Substantial Endangerment (I&SE) Order and Remedial Action Order was issued by DTSC in 1990 for the entire Brisbane Railyard property. In 1995, an amendment to the order divided the railyard into the OU-1 (portion north of Geneva Avenue, which is now designated OU-SM) and OU-2 (portion south of Geneva Avenue) operable units. The OU-2 site is approximately 130 acres and occupies the southern portion of the former SPTC Brisbane Railyard. The OU-2 site is bounded to the north by OU-SM site, to the west by Bayshore Boulevard, to the southwest by Industrial Way, to the east by the Caltrain railroad tracks, and to the south by Icehouse Hill (see **Figure 4.13-1**). The former railyard portion of the OU-2 site is currently owned by Sunquest Properties, Inc. The Industrial Way properties are located to the southwest of the former railyard and are bound by the railyard to the north and east, by Bayshore Boulevard to the west, and by Icehouse Hill to the south.

The Industrial Way properties include sites identified on GeoTracker as Kessler and Kessler #1 (250 Industrial Way) and Kessler and Kessler #2 (350 Industrial Way). This portion of the OU-2 site is currently owned by Brisbane Bayshore Properties. The properties along Industrial Way have been occupied by various commercial/industrial tenants over the last approximately 150 years. The former hide and glue plant located at 200 Industrial Way from approximately 1878 to 1962 was evaluated in 1987 by the USEPA. Based on this evaluation, the USEPA concluded that the property did not meet the criteria for inclusion on the CERCLA National Priorities List. According to the evaluation, there were no documented releases, the quantities of waste

generated and discharged were unknown, and there was not a target population that would have been affected by historical releases at the site. To date, none of the Industrial Way properties have been included on the CERCLA National Priorities List (Geosyntec 2021b). Aerial photographs of the OU-2 site taken between 1935 and 1991 are provided in Appendix A of the FS/RAP (Geosyntec 2021b).

The OU-2 site lies at the base of the Visitacion Valley between Candlestick Point to the north and Visitacion Point to the south. The OU-2 site is situated on a low-lying flatland that was formed by filling a former embayment located along the western margin of San Francisco Bay. The current land surface has been largely formed by filling of the area in the early 1900s. The site is relatively flat, excluding drainage ditches and delineated wetlands (Geosyntec 2021b).

Historical Use Summary

Former Railyard

Historical use of the former railyard is proved above in the discussion of OU-SM. The major railyard facilities located within OU-2 consisted of the following:

- Machine and Erecting Shop – constructed in 1920, this facility was a machine shop and mechanical construction shop.[289]
- Turntable – constructed in 1908 and retired in 1942, the turntable was used to transfer locomotives to the individual servicing stalls within the roundhouse.
- Roundhouse – constructed in 1908 and now a vacant structure, this was a service area for the locomotives.
- Oil Tank – constructed in 1920, this 3-million-gallon above-ground tank stored fuel oil, commonly called Bunker C, for boilers used in the steam locomotives. The tank was dismantled in 1988, and 550,000 gallons of residual oil were recovered and removed for disposal.
- Tank and Boiler Shop – constructed in 1922 and retired in 1963, this shop repaired water tanks and boilers for steam locomotives. The building was used by Lazzari Fuel Company until it was destroyed by fire in April 2024.
- Switching Yard – constructed in the early 1900s, the switching yard consisted of a series of tracks used for organizing and building freight trains. It was the largest part of the railyard. Caltrain operates a commuter line including four active tracks with two siding tracks along the eastern edge of the site.

[289] Also identified as the "Machine and Electric Shop" in historical figures and demolished after 1969 but before 1993 (Geosyntec 2021b).

- South Disposal Area – this area is a solid waste dump site containing waste imported to and generated at the railyard, and a railcar cleaning area (Geosyntec 2021b).

Chemicals that may have been used or generated as waste at these facilities include metals, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), and petroleum hydrocarbons, including gasoline-range hydrocarbons (TPH-g), diesel-range hydrocarbons (TPH-d), and polynuclear aromatic hydrocarbons (PAHs). Organochlorine pesticides (OCPs) may have also been used. In contrast, radionuclides are not suspected of being present in site soil at concentrations exceeding regional background concentrations based on the site history.

In 1985, DTSC (formerly California Department of Health Services, Toxic Substances Control Division) determined that "There has been a release of hazardous substances on, or into the land on the Southern Pacific Bayshore Yard site located east of the intersection of Bayshore Boulevard and Geneva Road, Brisbane." Therefore, DTSC issued an "Order to Post and Fence," which required SPTC "[T]o post the site with signs and enclose portions of the site with fences …" (DTSC 1985, as cited in Geosyntec 2021b).

Industrial Way Properties

The Industrial Way properties, which are located outside of the former railyard, include three former underground storage tank (UST) sites located at 250, 285, and 350 Industrial Way, in addition to other properties as discussed below that are not known to be impacted. The USTs located at 250, 285, and 350 Industrial Way were thought to have once been used in support of the former railyard operations and were adjacent to buildings historically related to railyard activities (Geosyntec 2021b).

Historical activity at Industrial Way also included the manufacture of glue and fertilizer by Consolidated Chemical/Stauffer Chemical and previous tenants between approximately 1878 and 1963. Historical industrial operations prior to 1990 were reportedly conducted at the following approximate locations (Geosyntec 2021b):

- 21 to 27 Industrial Way – automobile refinishing;
- 55 and 55A Industrial Way – Moore Manufacturing Company;
- 60 to 130 Industrial Way – fertilizer plant;
- 250 Industrial Way – glue works;
- 285 Industrial Way – hide and glue plant;
- 290 to 295 Industrial Way – Consolidated Chemical Industries; and
- 300 to 312 Industrial Way – bone storage.

A summary of historical uses of Industrial Way properties from 1977 through 1993 is provided in Appendix A of the FS/RAP (Geosyntec 2021b). Briefly, the properties at 21 through 27 and 55 through 400 Industrial Way comprise the Industrial Way properties included in the Brisbane Baylands Specific Plan. The properties at 10, 36, and 40 Industrial Way are excluded from the OU-2 FS/RAP (Geosyntec 2021b). The longest-tenured operation appears to be a hide and glue plant, which occupied the northern portion of the Industrial Way properties between approximately 1878 and 1962 and was owned successively by Pacific Bone, Coal, and Fertilizing Company; Consolidated Chemical Industries, Inc.; and Stauffer Chemical Company. Historical chemical use at the Industrial Way properties from 1977 through 1993 is provided in Table 7 of Appendix A of the OU-2 FS/RAP (Geosyntec 2021b). In addition to chemicals potentially used in the railyard, historical activities at Industrial Way properties may have included the use of the following hazardous materials (Geosyntec 2021b):

- Acids and bases;
- Gasoline and oils used in vehicle maintenance;
- Santobrite™, a product containing pentachlorophenol used as a preservative for wood and glue products; and
- Solvents used in printing, painting, dyeing textiles, and cleaning.

It was noted that chemicals in use at the time of site inspection in 1993 involved small quantities that appeared to be properly used, stored, and disposed of or recycled (T&R 1993, as cited in Geosyntec 2021b). The former railyard buildings have since been replaced by more modern buildings. Land uses at these properties currently include automobile garages, storage warehouses, and a boxing ring. Aside from the UST cases at 250, 285, and 350 Industrial Way, no chemical releases to the environment requiring regulatory response are documented in the RWQCB's and DTSC's electronic document repositories, GeoTracker and EnviroStor, respectively (Geosyntec 2021b).

Previous Environmental Investigations and Site Remediation

Numerous environmental investigations have been conducted at the OU-2 site since 1982 to characterize the presence, nature, and extent of contaminants resulting from historical operations. Investigations have identified metals (primarily arsenic, lead, and mercury); polynuclear aromatic hydrocarbons (PAHs); organochlorine pesticides (OCPs); polychlorinated biphenyls (PCBs); chlorinated volatile organic compounds (CVOCs); and petroleum hydrocarbons, including Bunker C oil, gasoline-range hydrocarbons (TPH-g), diesel-range hydrocarbons (TPH-d), and motor oil range hydrocarbons (TPH-mo) as chemicals of potential concern (COPCs).

Site remediation completed to date includes the removal of underground storage tanks (USTs) and the safe removal of hydrocarbon-impacted soil associated with the USTs adjacent to Industrial Way (Geosyntec 2021b).

Contaminants of Concern

In the absence of any additional remediation or mitigation efforts, the primary risk-driving contaminants of concern identified in the HRA are as follows:

- Soil: arsenic, lead, TPH-d, PCE, TCE, cis-1,2-DCE, and vinyl chloride
- Soil vapor (based on groundwater evaluation): benzene and vinyl chloride, PCE, TCE, and cis-1,2-DCE
- Groundwater (vapor intrusion pathway only): benzene and vinyl chloride PCE, TCE, and cis-1,2-DCE (Geosyntec 2021b)

The potential exposure pathways to these risk-driving contaminants of concern in soil are direct exposures (incidental ingestion, dermal contact, and inhalation of particulates in ambient air) and potential inhalation of VOCs in indoor air migrating from soil and shallow groundwater. Due to the presence of VOCs in soil and shallow groundwater, it is appropriate that soil vapor and groundwater cleanup levels for vapor intrusion be developed for implementation of the remedy and assessment of the need for vapor mitigation engineering controls during development (Geosyntec 2021b).

Contaminant Distribution

SOIL

Metals and PAHs are present in shallow fill soil at elevated concentrations across certain areas of OU-2. Specifically, arsenic and lead were detected in nearly every sampling location during the 2018 Data Gap Investigation at relatively elevated concentrations in shallow fill soil, likely resulting from the historical application of lead arsenate pesticide to the ground surface during railyard operations. VOCs, OCPs, and PCBs exceeded screening criteria at only a few locations, indicating that impacts on soil from these COCs are localized. The distribution of Bunker C oil has been delineated and appears to be contained to the fill layer and above the Young Bay Mud layer (BKF 2023).

GROUNDWATER

Dissolved metals concentrations in groundwater were generally low with localized elevated concentrations. VOC detections in groundwater were similarly limited. Benzene, ethylbenzene, naphthalene, and xylene exceedances were observed primarily in the former Bunker C oil tank area, and chlorinated solvents were in a localized area in the western-central portion of the site (BKF 2023).

Baseline Health Risk Assessment

A Baseline Health Risk Assessment (HRA) for OU-2 was prepared under the assumption that no remediation or mitigation would be implemented. Using this assumption, the HRA evaluated potential risks to current and future populations that could be exposed to compounds of potential concern (COPCs) at the site under different land use scenarios. The results of the HRA found that present site conditions are protective for site users, but future action to remediate or mitigate potential exposure to COPCs in soil and soil vapor is warranted to protect future users under a high-intensity, mixed-use redevelopment scenario (Geosyntec 2021b).

Feasibility Study/Remedial Action Plan

The FS/RAP has been reviewed and approved by the RWQCB (BKF 2023). The FS/RAP is discussed in detail above in Section 2.7.2, Site Remediation. Activities related to site remediation within OU-2 are required to be undertaken pursuant to the regulatory authority of the RWQCB as a prerequisite to Baylands development.

Former Brisbane Landfill

Landfill Site History

The former Brisbane Landfill is bounded to the east by US Highway 101, to the west by the railroad tracks, and to the south by the Brisbane Lagoon. The highway provides a physical barrier along the eastern boundary of the landfill that separates San Francisco Bay from the Brisbane Landfill. The northern edge of the Brisbane Landfill contains a row of industrial properties located north of Beatty Avenue, while the railroad and Tunnel Avenue represent the approximate western boundary of the Brisbane Landfill. Approximate boundaries of the Brisbane Landfill are shown in **Figure 4.13-2** (BKF 2023).

Prior to 1932, the area now occupied by the Brisbane Landfill site was part of San Francisco Bay. In 1896, the landfill site was purchased by the Southern Pacific Transportation Company (Southern Pacific Railroad or SPRR) and, by 1914, a railroad had been constructed to the west of the landfill site. In 1932, the landfill site was leased by the Sanitary Fill Company, which had subcontracted day-to-day filling operations to the Easly and Brassy Company. US Highway 101 was constructed in the mid-1950s, adjacent to the eastern landfill boundary. Records indicate that the highway was constructed on fill material sourced from the nearby Candlestick Point area and San Bruno Mountain. The highway acted to isolate the landfill site from direct wave action generated in San Francisco Bay (ENGEO 2022).

Generally, the landfill was filled in three main areas (see **Figure 4.13-2**)

- Fill Area I (northwestern portion) – Waste was placed here from 1932 through 1952. This fill area extended approximately 1,000 feet into San Francisco Bay from SPRR's railroad track area.
- Fill Area II (northeastern portion) – Waste was disposed here from 1953 through 1956. This area extended approximately 600 feet farther eastward into San Francisco Bay, and filling extended to the current eastern property boundary. An access road and Visitacion Creek divide Fill Areas I and II from Fill Area III to the south.
- Fill Area III (southern portion) – Waste was placed here from 1956 until 1967, when the landfill stopped receiving waste. The construction of an earthen dike was completed to facilitate the expansion of the landfill to the south.

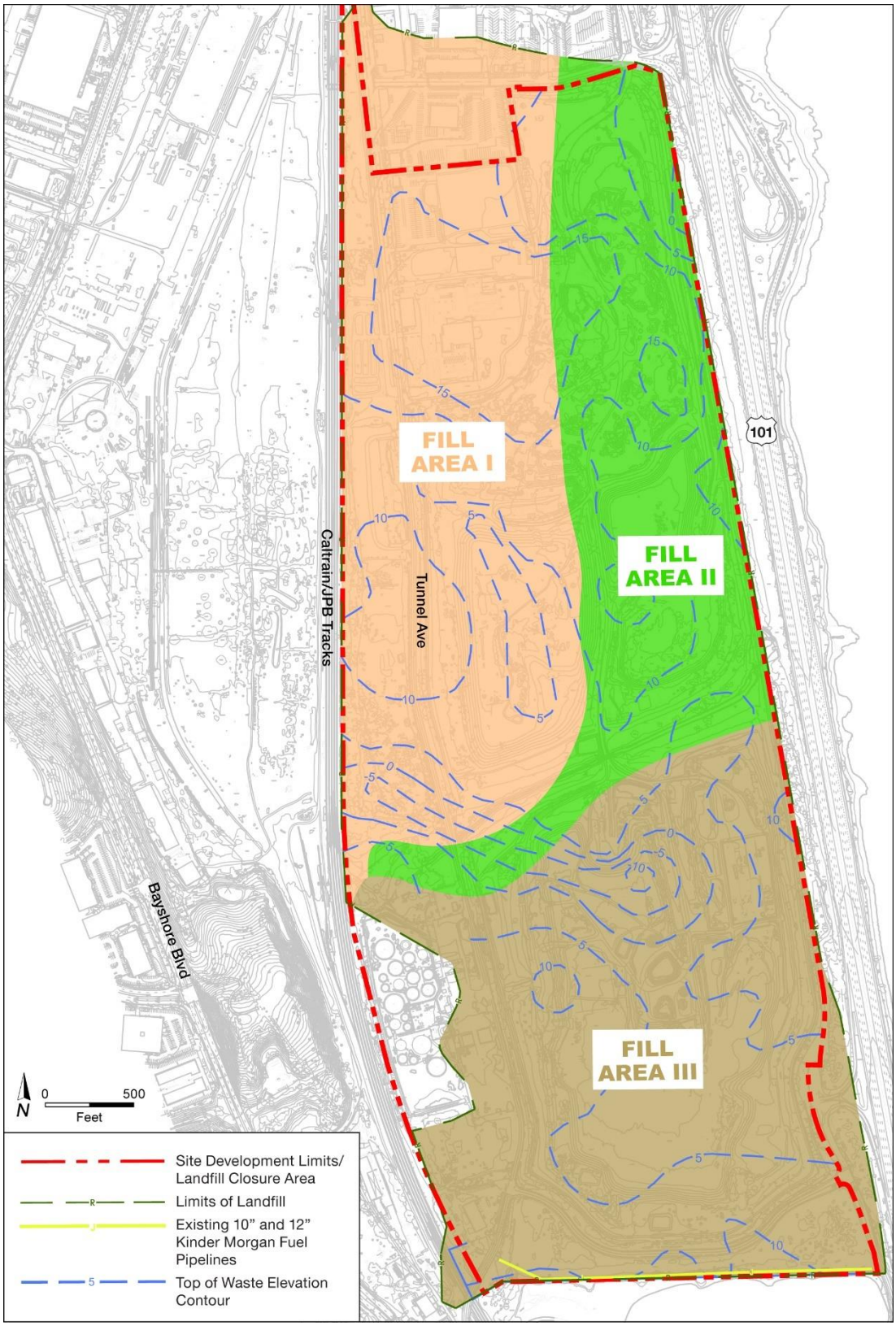
In 1967, the Easly and Brassy Company ceased to operate at the landfill, and the landfill has not accepted waste since then. The waste has since been covered with fill and inert debris. No records of the hydraulic properties or thickness of the fill were identified. A total estimated volume of 12½ million cubic yards of waste was disposed at the landfill. An estimated 73 percent of this waste was produced by residential and commercial activities. Inert fill accounts for approximately 25 percent, and the remaining 2 percent was assumed to be liquid waste (RWQCB 2001, as cited in ENGEO 2022).

At the time of the Brisbane Landfill operation and closure, modern waste disposal practices were not yet developed, and formal regulatory closure plans were not yet required. Typical of the standard practice at the time, waste was placed into the Bay water directly on the underlying native soil. The landfill does not have a liner, waste was not segregated into disposal cells, and there was no leachate collection system.

Various commercial and industrial structures, including petroleum storage tanks, have been constructed on the landfill since the 1950s. Portions of the landfill have been paved, but the surface cover of the majority of the landfill consists of permeable soil. Cover materials were added from the late 1960s until September 2017 on a large portion of the landfill.

In 1958, the RWQCB adopted Resolution 58-278 for the Brisbane Landfill, which prohibited waste discharge directly to surface water and required that a monitoring program be established. Between 1988 and 1992, a groundwater monitoring well network was installed on the portion of the landfill owned by Sunquest. A landfill gas extraction system consisting of vertical and horizontal extraction wells was installed from 1990 to 1991.

Figure 4.13-2: Existing Waste Conditions



In 1992, as required by Section 13273 of the California Water Code, a Solid Wastewater Quality Assessment Test was prepared for the Brisbane Landfill (Kleinfelder 1992, as cited in ENGEO 2022). The report identified contaminants of potential concern with the potential for off-site migration, particularly along the eastern and southern landfill boundaries. Hazardous materials were not identified.

Cleanup and Abatement Order No. 94-134 issued by the RWQCB in 1994 required maintenance of 2 feet of clean soil cover, a positive drainage gradient, and compliance with State Water Resources Control Board Order 92-08, which required an SWPPP for the landfill site. Waste Discharge Requirements were adopted in 2001 for the Brisbane Landfill. A Closure and Post-Closure Maintenance Plan was prepared for the site in March 2022. The plan was conditionally approved by the RWQCB.

Sections 4.15, *Geology, Soils, and Seismicity*, and Section 4.14, *Hydrology and Water Quality*, include discussion of existing geology and hydrology of the landfill portion of the Baylands.

Surface Conditions

Much of the landfill site has until recently been used as a soil recycling facility. Commercial and industrial facilities are also located in this portion, including Brisbane Recycling Company, Golden State Lumber, Transdev bus storage yard, and Avis Car Rental storage yard. A landfill gas extraction system is in place and has been maintained to provide continuous operation. A flare system for the landfill gas extraction system and compressor for the leachate management system are located on the northwest corner of the landfill. The Kinder Morgan tank farm is adjacent to the southwest corner of the former landfill. The rest of the site is covered with stockpiles that are covered with seasonal grasses. Ground surface elevations range from approximately 15 to 30 feet in the northern portion and around the stockpiles to 60 to 70 feet at the top of the stockpiles. Based on review of a Landfill Cover Thickness Investigation Report for the Brisbane Landfill prepared by Burns & McDonnell (B&MD) (B&MD 2001, as cited in ENGEO 2022), the existing soil stockpile material that is overlying the waste ranges in thickness from 1 to 37 feet. **Figure 4.13-2** provides a contour map of the estimated top of waste based on the data from the 2001 study; however, it is anticipated that significant settlement has occurred at the site since the study was performed, and the top of waste is likely lower than shown (ENGEO 2022).

Summary of Remedial Investigations Conducted to Date

Remedial investigations at the Brisbane Landfill have been conducted since 1987. Groundwater monitoring and landfill gas monitoring continue on an annual basis as required by the WDRs.

Groundwater

A groundwater monitoring well network was installed within portions of the Brisbane Landfill between 1987 and 2003 in accordance with the WDRs. There are 20 monitoring wells and two leachate monitoring wells located on the landfill. The Brisbane Landfill requires semi-annual groundwater monitoring (Order No. 01-041 and Title 27). The most recent Summer-Fall (August) 2021 Monitoring Report (Geosyntec 2021, as cited in ENGEO 2022) has reported groundwater and leachate monitoring well data to be consistent with historical data and indicated that the groundwater gradient is generally toward the south and east with a local component of flow toward Visitacion Creek (see **Figure 4.13-3**). No significant exceedances of clean up levels were reported (ENGEO 2022).

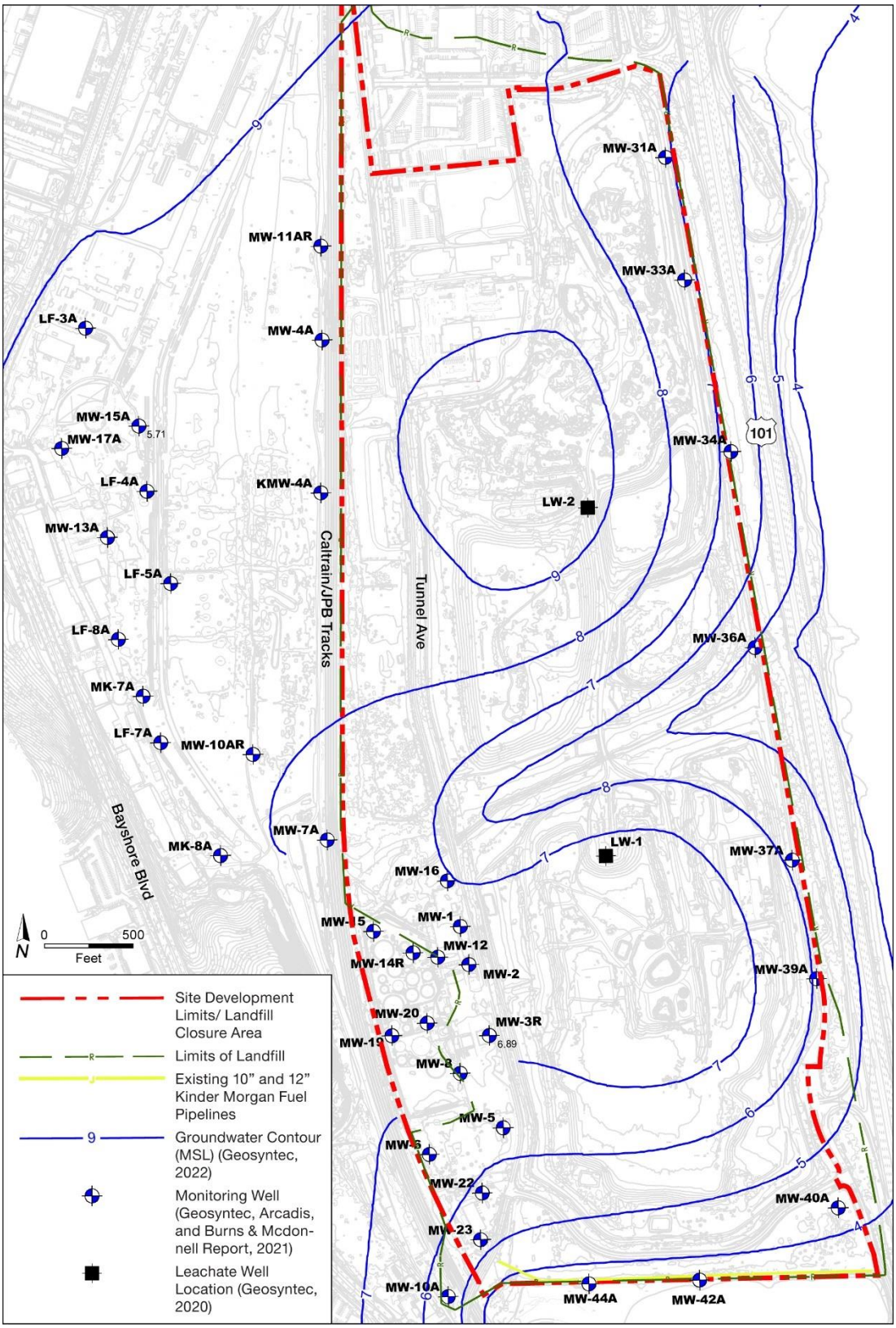
Leachate

The three sources of leachate at the landfill are surface infiltration, upward flow of pore water from Young Bay Mud consolidation, and upward flow from settlement and decomposition of waste. As described in the WDRs, leachate contains dissolved metals, elevated ammonia, VOCs, and SVOCs within the shallow and deep aquifer within the Brisbane Landfill. Landfill leachate is brackish to saline. The Brisbane Landfill is following a Leachate Monitoring Plan (LMP) that is in accordance with the WDRs (ENGEO 2022).

The existing leachate seep collection and transmission system at the Brisbane Landfill began operation on August 7, 2009, following its RWQCB approval in 2008. The system is designed to eliminate surface seepage of leachate from the landfill into the Brisbane Lagoon. Leachate is discharged to a Bayshore Sanitary District (BSD) sewer line for treatment and disposal. The San Francisco Public Utilities Commission (SFPUC) requires that the leachate seep collection and transmission system discharge be sampled semi-annually for chemicals required by the permit. Leachate sampling results are reported to the SFPUC and BSD. From August 10, 2009, to August 27, 2021, approximately 36.1 million gallons of leachate were discharged to the BSD sewer line (Sunquest 2021, as cited by ENGEO 2022).

The system receives regular maintenance and repair. Semi-annual sampling events are performed for the Brisbane Lagoon seeps, Visitacion Creek seeps, and leachate wells within the landfill footprint. Perimeter seep inspections occur on a quarterly basis. Water levels in interior leachate wells indicate that approximately 3 feet of leachate have accumulated within the landfill over the past 15 years. Infiltration of precipitation and consolidation of waste and Young Bay Mud under the weight of stockpiled soil are the likely source of the apparent leachate buildup (Geosyntec 2008a, as cited in ENGEO 2022).

Figure 4.13-3: Existing Groundwater Conditions at Former Brisbane Landfill



In the Summer–Fall 2021 Semiannual Discharge Monitoring Report (Geosyntec 2021, as cited in ENGEO 2022), the groundwater quality data collected at the landfill were statistically evaluated in order to identify trends or possible releases from the landfill. No significant exceedances were reported (ENGEO 2022). As discussed above in Section 2.6.2, *Landfill Closure*, the Closure and Post-Closure Maintenance Plan includes plans for a new leachate management system.

Surface Water and Seeps

There are two surface water stations located along Visitacion Creek, five seeps along the southern border of the landfill (near the Brisbane Lagoon), and three seeps along the eastern border of the landfill (along US Highway 101). The two surface water stations along Visitacion Creek and the five seeps along the Brisbane Lagoon are included in semi-annual sampling and quarterly perimeter observations, in accordance with the WDRs (RWQCB 2001, as cited in ENGEO 2022).

Based on the Summer-Fall 2021 Monitoring Report (Geosyntec 2021, as cited in ENGEO 2022), two surface water samples and two seep samples were collected, and the following results were reported:

- No VOCs, SVOCs, PCBs, or OCPs were detected in the surface water samples.
- Metals detected, including arsenic, barium, lead, nickel, and selenium, were within the range of historic concentrations.
- TDS was 31,000 mg/L, sulfate was 2,400 mg/L, and nitrate was not detected.
- The maximum concentration criterion for un-ionized ammonia was not exceeded in the 2021 monitoring event.
- The seeps tests along the Brisbane Lagoon indicated a presence of only chlorobenzene and 1,4-dichlorobenzene at maximum concentrations, below the California maximum contaminant level (MCL). One SVOC, 1,4-dichlorobenzene, was detected.
- No PCBs and OCPs were detected in the seep samples. The un-ionized portion of ammonia (as nitrogen) was calculated to be 2.68 mg/L (SG-3) and 0.53 mg/L (SG-4) (ENGEO 2022).

In 2021, Geosyntec observed interior stations that were dry, with no odors, no ponded water, and no evidence of cover erosion or daylighted waste. The perimeter stations also were observed to be generally dry, without odors, and no liquid was seen entering or leaving the landfill at the 16 perimeter stations. No significant exceedances were reported (ENGEO 2022).

Landfill Gas Management System

An existing gas collection and control system, installed in 1991, operates within the Brisbane Landfill on a less-than-continuous permit due to decreasing methane production. The landfill gas extraction system has received various maintenance during its operation. Due to low

landfill gas production, the flare currently operates a couple of hours per week. There are 57 landfill gas extraction monitoring wells, and landfill gas is monitored on a quarterly basis. The main header of the landfill gas extraction system surrounds the approximately 240-acre plot located east of Tunnel Avenue, north of Lagoon Way and west of US Highway 101. Monitoring reports indicate the landfill gas extraction system has been in compliance with the BAAQMD's operational criteria (ENGEO 2022).

Contaminants of Concern and Distribution

The following contaminants of concern have been identified at the former landfill (BKF 2022):

- Soil: No COCs have been identified for soil. Waste primarily consists of non-hazardous materials, consistent with Class III landfills.
- Groundwater: Shallow (Zone A) groundwater at the Brisbane Landfill is naturally brackish to saline. COCs for the shallow and deep groundwater zones at the landfill include the following:
    - Inorganics (ammonia/un-ionized ammonia, nitrate, sulfate, total dissolved solids [TDS], and total organic carbon [TOC]);
    - Metals (arsenic, barium, lead, nickel, and selenium);
    - Volatile organic compounds (VOCs);
    - Semi-volatile organic compounds (SVOCs); and
    - Organochlorine pesticides (OCPs) and PCBs.
- Landfill Gas: Low concentrations of methane.

Groundwater monitoring data from August 2020 indicate that COC concentrations are generally low and are highest in the southern (downgradient) portion of the Brisbane Landfill. Of the inorganic COCs, TDS, TOC, and sulfate are highest in shallow wells, and nitrate is highest in deep groundwater. Of the dissolved metals, concentrations of arsenic, barium, lead, nickel, and selenium are uniformly low in shallow and deep wells. The VOCs methyl tert-butyl ether (MTBE), chlorobenzene, 1,4-dichlorobenzene, and cis-1,2-dichlorobenzene are present at low levels in shallow groundwater, whereas acetone was the only organic chemical detected above the reporting limit in deep groundwater. The SVOCs acenaphthene and n-nitroso diphenyl were detected above reporting limits in shallow groundwater, but none were detected in deep groundwater. Neither organochlorine pesticides (OCPs) nor PCBs were detected above the reporting limit in shallow or deep groundwater (BKF 2023).

Former Police Shooting Range

The southerly slope of Icehouse Hill was previously used as a police shooting range. The site has not undergone remediation and has lead remaining from the leftover shells. Spent lead shot

or bullets left in the environment are subject to the broader definition of solid waste used in Sections 7002 and 7003 of the RCRA statute.

d. Existing Contamination and Assessments in the Vicinity of the Specific Plan Area

Schlage Lock Site (San Francisco Portion of OU-1)

The Schlage Lock Company manufactured door hardware and lock parts from 1926 to 1999 at a facility located at Bayshore and Sunnydale boulevards immediately north of the Baylands Specific Plan area in San Francisco. Operations started in a building known as Plant 1. The size of the facility was expanded in 1942 and 1950. The manufacturing process included stamping and machining metal alloys; deburring brass, bronze, nickel, silver, and steel parts; and cleaning brass and bronze parts with a product known as Safety Kleen 150, a petroleum naphtha solvent. Other solvents that contained trichloroethane were also commonly used at the facility, which closed operations in December 1999.

Soil removal and cleanup actions have been conducted by the landowner at this site since 1994 when a groundwater extraction and treatment system was installed. Groundwater was sampled quarterly to monitor the movement and levels of chemicals. The groundwater extraction and treatment system ceased operation in 2009. In 1996, an interim removal action was conducted by the landowner at the strip and degreasing rooms in Building 3 to remove soil contaminated with volatile organic compounds (VOCs). Also, in 1999, a soil vapor and extraction treatment system was installed by the landowner to remove soil vapor underneath the strip and degreasing area. The soil vapor and extraction treatment system was decommissioned in September 2008. This site is now part of the Visitacion Valley redevelopment project area.

As discussed above, the contaminated groundwater affecting OU-SM resulting from the Schlage Lock property is being addressed as documented in the Schlage OU FS/RAP (MACTEC 2009, as cited in Geosyntec 2021a). Remedial action for groundwater and soil contamination at the Schlage OU site was certified by DTSC in 2014 and operation and maintenance are ongoing (DTSC 2014, as cited in Geosyntec 2021a). Impacts on soil vapor on the UPC OU-SM site that result from the residual CVOCs in groundwater from the Schlage OU will be addressed in the remedial design phase and mitigated at the time occupied buildings are constructed, if necessary (Geosyntec 2021a).

Recology Solid Waste Transfer Facility

The existing 44-acre Recology Solid Waste Transfer Facility (Recology) site is located north of the Baylands Specific Plan area and is situated partially within the City of Brisbane and partially within the City and County of San Francisco. Operational activities include waste transfer, materials recovery, public disposal and recycling, vehicle weighing and maintenance, organics transfer, fueling, temporary hazardous materials storage, fleet parking, cart and container

maintenance, and storage. The facility included seven underground storage tanks (USTs) within a small area in the center of the facility that were removed in the mid to late 1990s. The Recology site is partly located over the former landfill.

Data indicate that multiple investigations and removal actions occurred between 1986 and 1999. Since February 1988, the site has been in the verification monitoring stage of the regulatory process. Groundwater at the site is impacted by total petroleum hydrocarbons in the form of diesel fuel. Data from the most recent remedial investigation report indicate that groundwater flow direction at the site is to the south toward the Specific Plan Area and that concentrations of total petroleum hydrocarbons in the form of gasoline, diesel, and motor oil at the site exceed the groundwater environmental screening levels (Fugro 2011).

Petroleum hydrocarbons were released to soil and groundwater at the Recology site from underground storage tanks (USTs) and dispensers. Site investigation and remediation activities commenced at the Recology site in August 2000. Two extraction wells were installed to remove free-floating petroleum products. On March 22, 2011, one extraction well had a sheen, and the other extraction well had no observable floating petroleum product. Groundwater in selected wells was sampled and analyzed in September 2010 for the following compounds (but not all of the listed compounds were analyzed in all wells): TPHd, TPHmo, TPHg, BTEX (benzene, toluene, ethylbenzene, and xylene), MTBE, and inorganic parameters (pH, electrical conductivity, dissolved oxygen). Results of analyses indicate that groundwater in the former underground storage tank (UST) area is affected primarily by petroleum hydrocarbons (Fugro West, Inc. 2011).

Kinder Morgan Tank Farm

Petroleum hydrocarbons were released to soil and groundwater at the Kinder Morgan tank farm and have been under investigation since the early 1990s (LFR 2008). This Spills, Leaks Investigation and Cleanup site, which is designated by the Baylands Specific Plan as an Existing Use Area, is a bulk petroleum storage facility and distribution terminal. The facility has 21 above-ground storage tanks, which are constructed on a bedrock outcrop to the west of the former Brisbane Landfill. Five loading rack facilities, where transport trucks are filled with petroleum products, are also located at the site. The Kinder Morgan Terminal is an important nexus in the fuel distribution system for Northern California and the Bay Area. In addition to supplying fuel to retail service stations in the Bay Area, the terminal provides aviation fuel to San Francisco International Airport. Since the early 1990s, Kinder Morgan has conducted subsurface assessments, including the installation of 33 groundwater monitoring wells, to evaluate impacted soil and groundwater quality conditions in the vicinity of the site.

Previous remedial actions have occurred between 1998 and 2006 and consisted of dual-phase extraction, non-aqueous phase hydrocarbons (NAPH) recovery, and soil excavations. The current approved remedial activities being implemented are monitored natural attenuation

(MNA) for the dissolved phase petroleum hydrocarbon plume in shallow groundwater and NAPH recovery using absorbent socks and hand bailing in wells exhibiting NAPH near the manifold and loading rack areas of the site (Arcadis 2011).

Conclusions in the Semiannual Groundwater Monitoring Report, July 1 to December 31, 2010, prepared for Kinder Morgan, have been reviewed and are summarized as follows (Arcadis 2011):

- Soil impacts are limited to the Kinder Morgan property.
    - Based on the total dissolved solids (TDS) concentrations, which are greater than 1,000 milligrams per liter (mg/L) (upper limit for drinking water supplies established in CCR Title 22, Section 64449), groundwater beneath the [Kinder Morgan] Specific Plan area is not considered to be a drinking water supply. Though water samples were found to be above estuary habitat environmental screening levels in surface waters adjacent to the Kinder Morgan facility, it was determined that the Kinder Morgan facility was not the source (Arcadis 2011).
    - Groundwater contaminants of concern include non-aqueous phase hydrocarbons, total petroleum hydrocarbons, benzene, and methyl tert-butyl ether (MTBE). The total petroleum hydrocarbons groundwater plume extends off the Kinder Morgan site underneath the footprint of the Brisbane Landfill. However, concentrations of contaminants of concern extending underneath the Brisbane Landfill are below environmental screening levels.
    - Groundwater was first encountered at a depth of 2 to 13 feet below the top of casing in the monitoring wells. Impacted groundwater beneath the Kinder Morgan site generally flows in a radial pattern outward from the center of the northern tank farm to the northeast and east toward the Brisbane Landfill. Recent groundwater measurements indicate that there is also a localized area of groundwater flow, westward from the Brisbane Landfill into the Kinder Morgan site.
    - During the fourth quarter of 2010, the concentration trends for total petroleum hydrocarbons, BTEX compounds, and MTBE were generally stable or decreasing in the majority of monitored site wells, but a few of the wells showed increasing concentrations. Plume extent for the majority of the contaminants has been shown to be stable or decreasing.
    - The presence of contaminants attributable to the Brisbane Landfill (e.g., chlorobenzene) supports the theory that groundwater flow beneath the landfill is a contributing source of groundwater contamination in the northeastern portion of the Kinder Morgan facility (Arcadis 2011). This theory has also been documented and confirmed by the RWQCB. Therefore, the combined groundwater flow directions and distribution of contaminants of concern in groundwater suggest that groundwater from the Brisbane Landfill is affecting groundwater beneath the Kinder Morgan site (Arcadis 2011).

> A report prepared for the site that evaluated various remediation alternatives, known as a Remedial Action Effectiveness Evaluation, concluded that the recent trends showing decreasing total petroleum hydrocarbons and volatile organic compounds (VOC) concentrations and the overall decreasing contamination plume size are largely the result of natural processes where the contaminants degrade into harmless elements (Arcadis 2011). A screening level risk evaluation conducted as part of the Remedial Action Effectiveness Evaluation found that concentrations of contaminants of concern in the Kinder Morgan groundwater plume, on the site, and below the landfill remain below the environmental screening levels (ESLs) for Indoor Air for Commercial/Industrial Land Use as established by the RWQCB. Concentrations of contaminants of concern in soil are above environmental screening levels for protection of a construction worker; however, protective measures are in place for construction workers at the Kinder Morgan facility.

In addition, as part of the 2011 Remedial Action Effectiveness Evaluation (Arcadis 2011) for the Kinder Morgan site, the possibility of volatilization of contaminants of concern from groundwater to indoor air was evaluated assuming potential commercial use. Maximum detected concentrations of volatile constituents were found to be below environmental screening levels for the protection of indoor air in a commercial or industrial setting (Arcadis 2011). This evaluation was performed for the well with the highest detected levels of contaminants of concern, located in the center of the Kinder Morgan property. Volatile constituents in wells bordering the Specific Plan area have most recently been below laboratory detection levels except in one well in the northeastern corner of the site that is impacted by contaminants of concern from the Brisbane Landfill (Arcadis 2011).

PG&E Martin Substation and Service Center

As shown in **Table 4.13-2**, the existing Martin Substation is listed twice as a hazardous materials site pursuant to Government Code Section 65962.5. This site is certified with land use controls and ongoing operation and maintenance of remedial measures.

e. Database Records Search

Environmental Risk Information Services (ERIS) performed a computerized public records search of government hazardous materials databases in December 2022. The database search was conducted for all sites located within 1 mile from the center of the Specific Plan area, depending on the database. **Table 4.13-1** lists, for each database, the number of hazardous sites located within the Specific Plan area vicinity. Although the agency lists are updated regularly, there may be contaminated sites that have not yet been identified and, therefore, are absent from the databases.

Table 4.13-1: Environmental Records Database Results in Vicinity of the Specific Plan Area

	Government Publication Date	Search Radius (miles)	Number of Sites
Federal Records Databases			
Superfund Enterprise Management System (SEMS) List 8R Active Site Inventory (SEMS)	9/28/2022	0.5	1
SEMS List 8R Active Sites (SEMS Archive)	9/28/2022	0.5	3
Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS)	10/25/2013	0.5	4
CERCLIS No Further Remedial Action Planned (NFRAP)	10/25/2013	0.5	2
Resource Conservation and Recovery Act (RCRA) CORRACTS-Corrective Action (RCRA CORRACTS)	9/5/2022	1	1
RCRA Transport, Store, Treat, or Dispose (TSD) Non-CORRACTS Facilities (RCRA TSD)	9/5/2022	0.5	13
RCRA Large Quantity Generators List (RCRA LQG)	9/5/2022	0.25	9
RCRA Small Quantity Generators List (RCRA SQG)	9/5/2022	0.25	25
RCRA Very Small Quantity Generators List (RCRA VSQG)	9/5/2022	0.25	2
RCRA Non-Generators (RCRA NON GEN)	9/5/2022	0.25	120
Emergency Response Notification System (ERNS)	8/28/2022	N/A	1
The Assessment, Cleanup, and Redevelopment Exchange System (ACRES) Brownfield Database (FED BROWNFIELDS)	9/12/2022	0.5	1
Petroleum Product and Crude Oil Rail Terminals (BULK TERMINAL)	6/29/2022	0.25	1
Additional Federal Environmental Record Sources			
Facility Registry Service (FRS)/Facility Index (FINDS/FRS)	11/2/2020	PO	89
Hazardous Materials Information Reporting System (HMIRS)	12/31/2010	0.125	2
Integrated Compliance Information System (ICIS)	10/15/2022	PO	1
Formerly Used Defense Sites (FUDS)	7/12/2022	1	1
Mineral Resource Data System (MRDS)	3/15/2016	1	7
Alternative Fueling Stations (ALT FUELS)	10/10/2022	0.25	12
State and Local Records Databases			
DTSC Response Sites (RESPONSE)	10/17/2022	1	9
EnviroStor	10/17/2022	1	26
Solid Waste Information System (SWIS) (SWF/LF)	11/7/2022	0.5	9
Waste Management Units (WMUD)	1/1/2000	0.5	2
EnviroStor Hazardous Waste Facilities (HWP)	10/17/2022	1	2
Construction and Demolition Debris Recyclers (C&D DEBRIS RECY)	6/20/2018	0.5	8
Recycling Centers (RECYCLING)	10/11/2022	0.5	1
Listing of Certified Dropoff, Collection, and Community Service Programs (CONTAINER RECY)	10/11/2022	0.5	1
Land Disposal Sites (LDS)	11/16/2022	0.5	2
Leaking Underground Storage Tanks (LUST)	11/16/2022	0.5	37
Delisted Leaking Storage Tanks (DELISTED LST)	11/16/2022	0.5	1
Permitted Underground Storage Tank in Geo Tracker (UST)	10/14/2022	0.25	3

	Government Publication Date	Search Radius (miles)	Number of Sites
Proposed Closure of USTs (UST CLOSURE)	5/5/2021	0.5	1
Historical Hazardous Substance Storage Information (HHSS)	8/27/2015	0.25	16
UST Statewide Environmental Evaluation and Planning System (SWEEPS) (UST SWEEPS)	10/1/1994	0.25	30
Above-Ground Storage Tanks (AST)	8/31/2009	0.25	1
State Water Resources Control Board (SWRCB) Historical Above-Ground Storage Tanks (AST) (AST SWRCB)	12/1/2007	0.25	10
Delisted Storage Tank (DELISTED TNK)	11/15/2022	0.25	3
California Environmental Reporting System (CERS) Tanks (CERS TANK)	10/7/2022	0.25	10
Delisted CERS Tanks (DELISTED CTNK)	10/7/2022	0.25	5
Historical Hazardous Substance Storage Container Information-Facility Summary (HIST TANK)	5/27/1998	0.25	16
Site Mitigation and Brownfields Reuse Program Facility Sites with Land Use Restriction (LUR)	10/17/2022	0.5	5
CALSITES Database (CALSITES)	5/1/2004	0.5	8
Voluntary Cleanup Program (VCP)	10/17/2022	0.5	3
GeoTracker Cleanup Program Sites (CLEANUP SITES)	11/16/2022	0.5	7
Delisted Cleanup Program Sites (DELISTED CLEANUP)	11/16/2022	0.5	1
Delisted County Records (DELISTED COUNTY)	12/13/2022	0.25	9
Additional State Environmental Record Sources			
Per- and Polyfluoroalkyl Substances (PFAS)	2/15/2022	0.5	1
Hazardous Waste and Substances Site (HWSS) List (HWSS CLEANUP)	5/20/2021	0.5	5
EnviroStor Inspection, Compliance, and Enforcement (INSP COMP ENF)	4/29/2021	1	1
School Property Evaluation Program Sites (SCH)	10/17/2022	1	1
California Hazardous Material Incident Report System (CHMIRS)	8/15/2022	PO	10
Historical CHMIRS (HIST CHMIRS)	1/1/1993	PO	1
Handlers from Hazardous Waste Manifest Data (HAZNET)	10/24/2016	PO	61
Generators from Hazardous Waste Manifest Data (HAZ GEN)	12/31/2017	PO	81
List of Treatment, Storage, and Disposal Facilities (TSDFs) from Hazardous Waste Manifest Data (HAZ TSD)	12/31/2017	0.5	5
Historical Hazardous Waste Manifest Data (HIST MANIFEST)	12/31/1992	PO	25
DTSC Registered Hazardous Waste Transporters (HW TRANSPORT)	9/6/2022	0.125	1
Historical Cortese List (HIST CORTESE)	11/13/2008	0.5	6
Cease and Desist Orders and Cleanup and Abatement Orders (CDO/CAO)	12/6/2021	0.5	1
California Environmental Reporting System (CERS) Hazardous Waste Sites (CERS HAZ)	10/7/2022	0.125	32
Delisted CERS Hazardous Waste Sites (DELISTED HAZ)	11/29/2018	0.5	18
Sites in GeoTracker (GEOTRACKER)	11/16/2022	0.125	4
Mines Listing (MINE)	6/23/2022	1	1
Toxic Pollutant Emissions Facilities (EMISSIONS)	12/31/2020	0.25	48

	Government Publication Date	Search Radius (miles)	Number of Sites
County Sources			
San Francisco County – Local Oversight Program (LOP) Sites (LOP SANFRAN)	8/8/2017	0.5	11
San Francisco County – Underground Storage Tank List (UST SANFRAN)	11/29/2022	0.25	1
San Francisco County – Above-Ground Storage Tank List (AST SANFRAN)	11/29/2022	0.25	1
San Francisco County – Certified Unified Program Agency (CUPA) SANFRAN	11/29/2022	0.25	6
San Francisco County – Maher Ordinance (MAHER SANFRAN)	11/2/2022	0.5	10
San Mateo County – LOP List (LOP SANMATEO)	12/14/2020	0.5	24
San Mateo County – CUPA Facilities List (CUPA SANMATEO)	02/20/2020	0.25	200
Additional Environmental Record Sources			
San Mateo County Medical Waste Facility (MED WST SANMATEO)	7/15/2022	0.25	21

SOURCE: Eris, 2022

A database records search for facilities and sites identified as meeting Government Code Section 65962.5 "Cortese List" requirements was also conducted to identify specific sites within and adjacent to the Baylands that were included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (see **Table 4.13-2**).

Table 4.13-2: Hazardous Materials Sites within and adjacent to the Baylands Specific Plan Area and Listed Pursuant to Government Code Section 65962.5

Hazardous Materials Site	Location	Contaminants of Concern	Status
Department of Toxic Substances Control EnviroStor Database			
Within Baylands Specific Plan Area			
Former Southern Pacific Rail Yard (Northern)	Western portion of the Baylands (OU-SM)	Metals, petroleum VOCs	Active – Feasibility Study/Remedial Action Plans approved
Former Southern Pacific Rail Yard (Southern)	Western portion of the Baylands (OU-2)	Contaminated soil, waste oil & mixed oil	Active – Feasibility Study/Remedial Action Plans approved
Within City of Brisbane Outside of the Baylands Specific Plan Area			
PG&E Martin Substation	Bayshore Boulevard and Geneva Avenue	Benzene, ethylbenzene, polynuclear aromatic hydrocarbons, toluene, xylenes	Voluntary Cleanup – No Further Action
		Benzene, polynuclear aromatic hydrocarbons, TPH – Motor oil, TPH – diesel	Certified Operation & Maintenance as of 5/4/1995
PG&E Martin Substation, Levinson, and OU-2	Bayshore Boulevard and Geneva Avenue	Polynuclear aromatic hydrocarbons, TPH – Motor oil, TPH – diesel	Certified Operation & Maintenance as of 6/30/2003
South Levinson Parcel	Bayshore Boulevard and Main Street	No contaminants found	Voluntary Cleanup – No Further Action

Hazardous Materials Site	Location	Contaminants of Concern	Status
Within City and County of San Francisco			
Schlage Lock	Bayshore Boulevard and Sunnydale Avenue	Metals, VOCs	Certified Operation & Maintenance
Leaking Underground Storage Tanks – State Water Resources Control Board GeoTracker Database			
Within Baylands Specific Plan Area			
Brisbane Baylands	Bayshore Boulevard	Cleanup Program Site	Open – Assessment & Interim Remedial Action
P&F Distributers	511 Tunnel Avenue	LUST Cleanup Site	Completed – Case Closed
Norcal – Chet C. Smith Trucking	515 Tunnel Avenue	LUST Cleanup Site	Completed – Case Closed
Western Art Stone	541 Tunnel Avenue	LUST Cleanup Site	Completed – Case Closed
Van Arsdale Harris Lumber Company	595 Tunnel Avenue	LUST Cleanup Site	Completed – Case Closed
Tuntex Properties	Bayshore Boulevard and Geneva Avenue	Cleanup Program Site	Completed – Case Closed
Kessler & Kessler #2	350 Industrial Way	LUST Cleanup Site	Completed – Case Closed
Within City of Brisbane Outside of the Baylands Specific Plan Area			
Kinder Morgan Brisbane Terminal	950 Tunnel Avenue	Cleanup Program Site	Open – Verification Monitoring
V&A Auto Repair	2800 Bayshore Boulevard	LUST Cleanup Site	Completed – Case Closed
Proxy Message Center	140 Valley Drive	LUST Cleanup Site	Completed – Case Closed
Crocker Business Park	185 Valley Drive	LUST Cleanup Site	Completed – Case Closed
Within City and County of San Francisco			
TW Automotive	2500 Bayshore Boulevard	LUST Cleanup Site	Completed – Case Closed
Olympic Station (former)	2550 Bayshore Boulevard	LUST Cleanup Site	Completed – Case Closed
Bayshore Service	2598 Bayshore Boulevard	LUST Cleanup Site	Completed – Case Closed
Macor–Norcal Waste System	401 Tunnel Avenue	LUST Cleanup Site	Completed – Case Closed
Sanitary Fill Co.	501 Tunnel Avenue	LUST Cleanup Site	Completed – Case Closed
Norcal-Sanitary Fill Co.	501 Tunnel Avenue	LUST Cleanup Site	Completed – Case Closed
Michelucci & Associates	505 Tunnel Avenue	LUST Cleanup Site	Completed – Case Closed
Norcal Sunset Scavenger	Tunnel Avenue and Beatty Avenue	LUST Cleanup Site	Completed – Case Closed
Within City of Daly City			
Chevron Station	2690 Bayshore Boulevard	LUST Cleanup Site	Completed – Case Closed
Citgo Station	2700 Bayshore Boulevard	LUST Cleanup Site	Completed – Case Closed
S. E. Rykoff & Co.	480 Talbert Avenue	LUST Cleanup Site	Completed – Case Closed

Hazardous Materials Site	Location	Contaminants of Concern	Status
State Water Resources Control Board Cease and Desist Orders and Cleanup Abatement Orders			
Within City of Brisbane			
SFPPP (Kinder Morgan) Brisbane Terminal	950 Tunnel Avenue	Enforcement Action	

SOURCE: CalEPA, 2023

4.13.3 REGULATORY CONTEXT FOR BAYLANDS DEVELOPMENT

a. Federal Laws, Plans, Programs, and Regulations

Resource Conservation and Recovery Act

Federal hazardous waste regulations are generally promulgated under the Resource Conservation and Recovery Act (RCRA). Pursuant to RCRA, the United States Environmental Protection Agency (USEPA) regulates the generation, transportation, treatment, storage, and disposal of hazardous waste in a "cradle to grave" manner. RCRA was designed to protect human health and the environment, reduce or eliminate the generation of hazardous waste, and conserve energy and natural resources. The USEPA has largely delegated responsibility for implementing the RCRA program to the State of California, which implements this program through the California Hazardous Waste Control Act.

RCRA regulates landfill siting, design, operation, closure (including identifying liner and capping requirements), and post-closure for licensed landfills. In California, RCRA landfill requirements are delegated to the California Department of Resources Recycling and Recovery (CalRecycle), which is discussed in detail below. RCRA also allows the USEPA to control risk to human health at contaminated sites. Vapor intrusion presents a significant risk to human populations overlying contaminated soil and groundwater and was addressed in the human health risk assessments and remedial action objectives prepared for contaminated sites within the Baylands, discussed below.

Safe Drinking Water Act

The federal Safe Drinking Water Act, 40 Code of Federal Regulations (CFR) Part 141, gives the USEPA the power to establish water quality standards and beneficial uses for waters from below- or above-ground sources of contamination. For the Specific Plan area, water quality standards are administered by the San Francisco Bay RWQCB.

USEPA Superfund and Contingency Planning Regulations

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

The 1980 Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as "Superfund," established prohibitions and requirements concerning closed and abandoned hazardous waste sites, provided for liability of persons responsible for releases of hazardous waste at these sites, and established a trust fund to provide for cleanup when no responsible party for cleanup of a contaminated site could be identified. The law authorizes two kinds of response actions: (1) short-term removals, where actions may be taken to address releases or threatened releases requiring prompt response; and (2) long-term remedial response actions that permanently and significantly reduce the dangers associated with releases or threats of releases of hazardous substances that are serious, but not immediately life threatening. These actions can only be conducted at sites listed on the USEPA's National Priorities List, established by the National Contingency Plan.

Superfund Amendments and Reauthorization Act (SARA)

The Superfund Amendments and Reauthorization Act (SARA) amended CERCLA in 1986 and stressed the importance of permanent remedies and innovative treatment technologies in cleaning up hazardous waste sites. It also required Superfund actions to consider the standards and requirements found in other state and federal environmental laws and regulations, provided expanded enforcement authorities and settlement tools, increased state involvement in the Superfund program, increased the focus on human health problems posed by hazardous waste sites, encouraged greater citizen participation in making decisions on how sites should be cleaned up, and increased the size of the trust fund to $8.5 billion. SARA also required the USEPA to revise the Hazard Ranking System to ensure that it accurately assessed the relative degree of risk to human health and the environment posed by uncontrolled hazardous waste sites that may be placed on the National Priorities List.

As shown in **Table 4.13-1**, the environmental database records search conducted for the Specific Plan area include the Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) database and the CERCLIS No Further Remedial Action Planned (NFRAP) database. The Baylands was once considered for inclusion but was not ultimately designated a Superfund site.

National Priorities List and Hazard Ranking System

The National Priorities List is the list of sites of known or threatened releases of hazardous substances, pollutants, or contaminants throughout the United States and its territories. The National Priorities List is intended primarily to guide the USEPA in determining which sites warrant further investigation. The Hazard Ranking System is the principal mechanism that the USEPA uses to place uncontrolled waste sites on the National Priorities List. It is a numerically

based scoring system that uses information from initial, limited investigations—the preliminary assessment, the site inspection, and the expanded site inspection if necessary—to assess the relative potential of sites to pose a threat to human health or the environment.

There are no sites within or in the vicinity of the Baylands included on the National Priorities List (USEPA 2022).

Emergency Planning and Community Right-to-Know Act of 1986 and America's Water Infrastructure Act of 2018

The Emergency Planning and Community Right-to-Know Act was passed to address concerns regarding the environmental and safety hazards posed by the storage and handling of toxic chemicals. The USEPA imposed requirements related to emergency planning and "Community Right-to-Know" reporting on hazardous and toxic chemicals. Community Right-to-Know provisions are intended to increase the public's knowledge and access to information on chemicals at individual facilities, their uses, and releases into the environment. States and communities, working with facilities, can use the information to improve chemical safety and protect public health and the environment.

Section 2018 of the America's Water Infrastructure Act requires state and tribal emergency response commissions to notify the applicable state agency (i.e., California State Water Resources Control Board, Division of Drinking Water) of any reportable releases and provide community water systems with hazardous chemical inventory data.

To implement the Emergency Planning and Community Right-to-Know Act, each state is required to appoint a State Emergency Response Commission, which is required to divide each state into Emergency Planning Districts and to name a Local Emergency Planning Committee for each district. The federal Emergency Planning and Community Right-to-Know Act program is administered in California by the California Governor's Office of Emergency Services (Cal OES), a State Emergency Response Commission, six Local Emergency Planning Committees, and 83 Certified Unified Program Agencies (CUPAs). The California Emergency Response Commission (also known as the Chemical Emergency Planning and Response Commission) oversees implementation of Emergency Planning and Community Right-to-Know Act in California. San Mateo County is a member of the Local Emergency Planning Committee Region II (Coastal Region).

Hazardous Materials Transportation Act

The transportation of hazardous materials is regulated by the Hazardous Materials Transportation Act, which is administered by the Research and Special Programs Administration of the United States Department of Transportation (USDOT). The Act provides USDOT with a broad mandate to regulate the safe transport of hazardous materials with the purpose of adequately protecting the nation against risk to life and property, which is inherent

in the commercial transportation of hazardous materials. These USDOT regulations are applicable to any person who transports, ships, causes to be transported or shipped, or is involved in any way with the manufacture or testing of hazardous materials packaging or containers. USDOT regulations pertain to the actual movement of hazardous materials and govern every aspect of the movement, including packaging, handling, labeling, marking, placarding, operational standards, and highway routing. Additionally, USDOT is responsible for developing curricula to train for emergency response and administers grants to states and Native American tribes for ensuring the proper training of emergency responders.

Occupational Safety and Health Act of 1970

Federal and state occupational health and safety regulations contain provisions regarding hazardous waste management through the Occupational Safety and Health Act of 1970 (amended), which is implemented by the Occupational Safety and Health Administration (OSHA). OSHA regulates the administration of Title 29 of the Code of Federal Regulations (29 CFR), which requires special training of handlers of hazardous materials; notification to employees who work in the vicinity of hazardous materials; acquisition from the manufacturer of material safety data sheets, which describe the proper use of hazardous materials; and training of employees to remediate any hazardous material accidental releases.

OSHA also establishes standards regarding safe exposure limits for chemicals to which construction workers may be exposed. Safety and Health Regulations for Construction (29 CFR 1926.65 Appendix C) contains requirements for construction activities, which include occupational health and environmental controls to protect worker health and safety. The guidelines describe the health and safety plan(s) that must be developed and implemented during construction, including associated training, protective equipment, evacuation plans, chains of command, and emergency response procedures.

Due to the existence of hazardous materials in the vicinity of the Specific Plan area, adherence to applicable hazard-specific OSHA standards would be required to maintain worker safety. For example, methane is regulated by OSHA under 29 CFR Part 1910.146 relative to worker exposure to a "hazardous atmosphere" within confined spaces where the presence of flammable gas vapor or mist is in excess of 10 percent of the lower explosive limit. Additionally, Title 49 of the CFR governs the manufacture of packaging and transport containers, packing and repacking, labeling, and the marking of hazardous material transport, and Title 42, Chapter 82 governs solid waste disposal and resource recovery.

Pipeline and Hazardous Materials Safety Administration

The Pipeline and Hazardous Materials Safety Administration is the primary federal regulatory agency responsible for ensuring that pipelines are safe, reliable, and environmentally sound. The federal pipeline integrity management regulations for hazardous liquid pipelines (Section

195.452) and natural gas pipelines (Sections 192.901–192.951) require operators to perform risk assessments of their pipelines to:

- Ensure that integrity assessment methods (internal inspection, pressure testing, direct assessment, etc.) are employed to address significant threats on pipeline segments.
- Ensure that integrity assessments of the highest risk segments are scheduled with priority over lower risk segments.
- Ensure that assessments of threats and potential consequences are conducted to define, evaluate, and implement additional measures that address significant threats to the pipeline (e.g., conducting depth-of-cover surveys and correcting any deficiencies), or reduce potential consequences of failures (e.g., installing additional valves on the pipeline to reduce the amount of liquid or gas that might be released should a failure occur).

b. State Laws, Plans, Programs, and Regulations

Hazardous Materials Management

In the regulation of hazardous waste management, California law often mirrors or is more stringent than federal law. The California Environmental Protection Agency (CalEPA) and California Occupational Safety and Health Administration (Cal/OSHA) are the primary state agencies responsible for hazardous materials management. Additionally, the California Emergency Management Agency (CalEMA) administers the California Accidental Release Prevention (CalARP) program. The California Department of Toxic Substances Control (DTSC), which is a branch of CalEPA, regulates the generation, transportation, treatment, storage, and disposal of hazardous waste, as well as the investigation and remediation of hazardous waste sites. The DTSC program incorporates the provisions of both federal (RCRA) and state hazardous waste laws.

California Unified Program Administration

In 1996, CalEPA adopted the Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program). The Unified Program consolidates and makes consistent the administrative requirements, permits, inspections, and enforcement activities of the following six state programs that regulate business and industry use, storage, handling, and disposal of hazardous materials and wastes:

- Hazardous Materials Release Response Plans and Inventories (Business Plans)
- California Accidental Release Program (CalARP)
- Underground Storage Tank Program

- Above-Ground Petroleum Storage Act Program
- Hazardous Waste Generator and On-Site Hazardous Waste Treatment (tiered permitting) Programs
- California Uniform Fire Code: Hazardous Material Management Plans and Hazardous Material Inventory Statements

State agency partners involved in the Unified Program have the responsibility of setting program element standards, working with CalEPA on program consistency, and providing technical assistance to the Certified Uniform Program Agencies (CUPAs). The following state agencies are involved with the Unified Program:

- **California Environmental Protection Agency (CalEPA).** The Secretary of CalEPA is responsible for coordinating the administration of the Unified Program. The Secretary certifies Unified Program agencies.
- **California Department of Toxic Substances Control (DTSC).** DTSC provides technical assistance and evaluation for the hazardous waste generator program, including on-site treatment (tiered permitting). Under California Code of Regulations (CCR) Title 22 and the California Hazardous Waste Control Law, Chapter 6.5, DTSC regulates the generation, transportation, treatment, storage, and disposal of hazardous waste.
- **California Governor's Office of Emergency Services (Cal OES).** Cal OES is responsible for providing technical assistance and evaluation of the Hazardous Material Release Response Plan (Business Plan) Program and the CalARP programs.
- **Office of the State Fire Marshal.** The Office of the State Fire Marshal is responsible for ensuring the implementation of the Hazardous Material Management Plans and the Hazardous Material Inventory Statement Programs. These programs tie in closely with the Business Plan Program.
- **State Water Resources Control Board (SWRCB).** SWRCB provides technical assistance and evaluation for the underground storage tank program in addition to handling the oversight and enforcement for the above-ground storage tank program.

Both RCRA and the Hazardous Waste Control Law impose "cradle to grave" regulatory systems for handling hazardous waste in a manner that protects human health and the environment. CalEPA has delegated some of its authority under the Hazardous Waste Control Law to county health departments and other CUPAs.

The San Mateo County Environmental Health Services Division is the Certified Uniform Program Agency and thus provides regulatory oversight for federal, state, and local hazardous materials use and disposal laws and regulations throughout the County. County Environmental Health Services protects the public health and the environment from accidental releases and improper handling, storage, transportation, and disposal of hazardous materials and wastes

through coordinated efforts of inspections, emergency response, enforcement, and site mitigation oversight. In addition, County Environmental Health Services implements the following programs:

- Hazardous Materials Reporting and Response Planning (Hazardous Materials Disclosure)
- Uniform Fire Code Business Plan
- Hazardous Waste Generation and On-Site Treatment
- Accidental Release Prevention Program
- Above-Ground Storage Tank Regulations
- Underground Storage Tank Regulations

Hazardous Waste Control Act

The Hazardous Waste Control Act established the California Hazardous Waste Control Program within the Department of Health Services, which was more comprehensive than the federal RCRA system. Emergency regulations enacted in 1973 clarified and defined the hazardous waste program as follows:

- The regulations included definitions of what was a waste and what was hazardous, as well as what was necessary for appropriate handling, processing, and disposal of hazardous and extremely hazardous waste in a manner that would protect the public, livestock, and wildlife from hazards to health and safety.
- The early regulations also established a tracking system for the handling and transportation of hazardous waste from the point of waste generation to the point of ultimate disposition, as well as a system of fees to cover the costs of operating the hazardous waste management program.
- The program established a technical reference center for public and private use dealing with all aspects of hazardous waste management.

Hazardous Waste and Substance Sites (Cortese) List

The Cortese List is used by the state, local agencies, and developers to comply with California Environmental Quality Act (CEQA) requirements for providing information about the location of hazardous materials release sites. Government Code Section 65962.5 requires CalEPA to develop an updated Cortese List at least annually. DTSC and other state and local government agencies provide additional hazardous material release information for the Cortese List. While Government Code Section 65962.5 refers to preparation of a "list," this information is now largely available through on-line databases, including EnviroStor and GeoTracker. The

Environmental Database Records Search conducted for the Specific Plan included these two databases and more (see **Table 4.13-1**).

Hazardous Materials Business Plans

Article 1 of Chapter 6.95 of the California Health and Safety Code (Sections 25500–25520) requires that any business that handles, stores, or disposes of a hazardous substance at a given threshold quantity must prepare a Hazardous Materials Business Plan (Business Plan). Business Plans are intended to minimize hazards to human health and the environment from fires, explosions, or an unplanned release of hazardous substances into air, soil, or surface water. The Business Plan must be carried out immediately whenever a fire, explosion, or unplanned chemical release occurs. Business Plans include three sections: (1) an inventory of hazardous materials, including a site map that details their locations; (2) an emergency response plan; and (3) an employee-training program. Business Plans serve as an aid to employers and employees in managing emergencies at a given facility. They also help better prepare emergency response personnel for handling a wide range of emergencies that might occur at the facility.

Hazardous Materials Business Plans are submitted to the Environmental Health Services Hazardous Materials Division and must be resubmitted, reviewed, revised, or amended on a regular basis. Business Plans must also be amended within 30 days whenever there are changes in the amount or location of stored hazardous chemicals on a site. The Hazardous Materials Division conducts routine inspections at businesses required to submit Hazardous Materials Business Plans. The purpose of these inspections is to (1) ensure compliance with existing laws and regulations concerning Hazardous Materials Business Plan requirements, (2) identify existing safety hazards that could cause or contribute to an accidental spill or release, and (3) suggest preventative measures designed to minimize the risk of a spill or release of hazardous materials. After initial submission of a Business Plan, the business must review and recertify the Plan on a regular basis.

California Accidental Release Prevention (CalARP) Program

The purpose of the California Accidental Release Prevention (CalARP) program is to prevent accidental releases of substances that can cause serious harm to the public and the environment, to minimize the damage if releases do occur, and to satisfy community right-to-know laws.

This is accomplished by requiring businesses that produce, handle, process, distribute, or store certain chemicals over a threshold quantity to develop a Risk Management Program, prepare a Risk Management Plan, and submit the plan to the local Certified Unified Program Agency (in San Mateo County, the Environmental Health Services Division).

The CalARP program requires that a risk management plan include a hazard assessment program, an accidental release prevention program, and an emergency response plan. The risk management plan must be revised every 5 years or as necessary. The risk management plan

must consider proximity to sensitive populations located in schools, residential areas, general acute care hospitals, long-term health care facilities, and child day care facilities. The risk management plan must also consider external events such as seismic activity. Typical facilities or businesses that are required to prepare risk management plans include ammonia refrigeration facilities, water treatment and wastewater treatment plants that handle chlorine gas, and facilities that store flammable chemicals such as methane and propane.

Occupational Safety (Title 8 – Cal/OSHA)

Cal/OSHA administers federal occupational safety requirements and additional state requirements in accordance with CCR Title 8. Cal/OSHA requires preparation of an Injury and Illness Prevention Program (IIPP), which is an employee safety program of inspections, procedures to correct unsafe conditions, employee training, and occupational safety communication. This program is administered via inspections by the local Cal/OSHA enforcement unit.

Cal/OSHA also regulates lead and asbestos exposure during construction activities under CCR Title 8, Section 1532.1, Lead, and Section 1529, Asbestos. These sections establish the rules and procedures for conducting demolition and construction activities such that worker exposure to lead and asbestos contamination is minimized or avoided. Compliance with Cal/OSHA regulations and associated programs would be required for the Baylands Specific Plan due to the potential hazards posed by on-site construction activities and contamination from former uses.

Emergency Response to Hazardous Materials Incidents

The California Governor's Office of Emergency Services (Cal OES) develops and maintains state-level emergency plans and planning guidance for state and local agencies.

California Emergency Services Act

The California Emergency Services Act was adopted to establish the state's roles and responsibilities during human-made or natural emergencies that result in conditions of disaster and/or extreme peril to life, property, or the resources of the state. The California Emergency Services Act requires development of the State of California Emergency Plan that describes how response to natural or human-caused emergencies occur in California. The State Emergency Plan describes how emergency operations are conducted, how mutual aid is rendered, what emergency services are offered by government agencies, how resources are mobilized, how the public is informed, and how continuity of government is maintained during emergency. The SEP further describes hazards mitigation, as well as preparedness and recovery from disasters.

California Disaster Assistance Act

The California Disaster Assistance Act authorizes the Director of Cal OES to administer a disaster assistance program that provides financial assistance from the state for costs incurred

by local governments as a result of a disaster event. Funding for the repair, restoration, or replacement of public real property damaged or destroyed by a disaster is made available when the Director concurs with a local emergency proclamation requesting state disaster assistance. The program also provides for the reimbursement of local government costs associated with certain emergency activities undertaken in response to a state of emergency proclaimed by the Governor. In addition, the program may provide matching fund assistance for cost sharing required under federal public assistance programs in response to a Presidential Major Disaster or Emergency Declaration.

Remediation Requirements for the Baylands

Remedial Action Plan for Operable Unit-SM (OU-SM)

The California Department of Toxic Substances Control (DTSC) approved a Feasibility Study/Remedial Action Plan (FS/RAP) and accompanying Human Health Risk Assessment (HHRA) for the portion of the Baylands known as Operable Unit-SM (OU-SM) in October 2021.[290] The OU-SM site is approximately 35 acres and occupies the northern portion of the former railyard within the Baylands (see **Figure 4.13-1**).

The FS/RAP establishes remedial action objectives consisting of site-specific, quantitative goals that define the extent of cleanup required to achieve the appropriate level of protectiveness for human health and the environment along with media-specific cleanup levels for:

- **Soil:** arsenic, lead, mercury, carcinogenic PAHs, naphthalene, TPH-d, and Aroclor-1260
    - *Remedial Action Objective:* Prevent exposure to soil with constituents of concern exceeding clean up levels by eliminating the exposure pathway for future receptors, which include incidental ingestion, inhalation of windblown dust particles, and dermal contact.
- **Soil vapor:** Chlorinated Volatile Organic Compounds (CVOCs) (1,1-dichloroethene; cis-1,2-dichloroethene; trans-1,2-dichloroethene; tetrachloroethene; trichloroethene; and vinyl chloride)
    - *Remedial Action Objective:* Prevent exposure to CVOCs in soil vapor at concentrations that exceed the cleanup levels for soil vapor by either demonstrating through a site-specific risk assessment that no significant risk is present, or by blocking or minimizing the vapor intrusion pathway from CVOCs in soil vapor that originate from the Schlage OU groundwater plume.

[290] The approved Feasibility Study/Remedial Action Plan and DTSC approval letter can be found at https://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=41490037&doc_id=60410165.

- **Groundwater:** CVOCs (1,1-dichloroethene; cis-1,2-dichloroethene; trans-1,2-dichloroethene; tetrachloroethene; trichloroethene; and vinyl chloride)
    - *Remedial Action Objective:* Prevent exposure to CVOCs in groundwater associated with the Schlage OU CVOC plume by eliminating inhalation risks through the vapor intrusion pathway where significant risk exists, preventing ingestion and dermal contact through the use of groundwater for potable and agricultural purposes, and minimizing dermal exposure of CVOCs and metals in groundwater to construction workers. Treatment of CVOCs in groundwater that migrated beneath the site from the Schlage OU will continue, as directed in the Schlage OU RAP, until the cleanup levels established for the Schlage OU cleanup have been met.

Required remedial actions included in the FS/RAP include:

- **Placement of a Soil Cap to Cover and Prevent Exposure to Existing Soils Containing Constituents of Concern.** Prior to constructing the clean soil cap, a demarcation layer consisting of a bright-colored geotextile fabric will be placed atop the existing soil to indicate the contact between the clean soil cap and the underlying material.

  All earthwork is required to be conducted in accordance with a dust control plan to be approved by DTSC that will define methods to be used for dust monitoring and procedures for minimizing dust emission. All earthwork will also be required to be conducted in accordance with a stormwater pollution prevention plan (SWPPP) to minimize impacts to the local stormwater conveyance system and receiving waters. The SWPPP will identify best management practices for controlling stormwater and preventing sediment transport in run-off during construction.

  In areas where impacted soil cannot be capped in-place with hardscape or a minimum of 5 feet of clean fill, such as along Bayshore Boulevard, the impacted soil will be excavated and either relocated on-site beneath a cap (e.g., roadways, building foundations, concrete areas, asphalt parking lots, or 5 feet of clean soil) or transported off-site to an appropriate disposal facility. All soil excavation, stockpiling, relocation, and/or off-site hauling will be conducted in accordance with the Dust Control Plan and SWPPP to be approved by DTSC.
- **Soil Vapor Mitigation.** Soil vapor sampling will be conducted at proposed building locations to assess, at a screening level, the potential need for vapor mitigation systems in buildings planned for construction. In order for this sampling data to be useful, it cannot be conducted until after the site has been capped and re-graded to the new development elevation, and after soil vapor concentrations have reached steady state at the target sample depth(s). The soil vapor sampling plan will be prepared in accordance with applicable DTSC guidance documents on evaluating vapor intrusion and will be submitted to DTSC for approval in advance of performing field work.

- **Land Use Restrictions.** One or more land use covenants will be recorded on the title to the properties within OU-SM with restrictions to limit human exposure to contaminants. The Land Use Covenant(s) will include the following restrictions:
    - No occupied buildings, including sensitive uses, where CVOC concentrations in soil vapor exceed cleanup levels without DTSC approval based on either (1) a risk assessment demonstrating site conditions pose no significant risk to human health, or (2) engineering controls, such as building design or gas intrusion mitigation systems, that will reduce the risk to an acceptable level;
    - No growing produce or vegetables for human consumption in native soil. Plants for human consumption may be grown if they are planted in raised beds (above the approved cover) containing non-native soil. Trees producing edible fruit (including trees producing edible nuts) may also be planted provided they are grown in containers with a bottom that prevents the roots from penetrating the native soil;
    - No extraction or use of underlying groundwater is allowed without a Groundwater Management Plan pre-approved by DTSC;
    - No drilling for any water, oil, or gas, or extraction or removal of groundwater may occur without a DTSC-approved Groundwater Management Plan and prior written approval by DTSC;
    - No interference with, or modification of, a vapor mitigation system shall be permitted without prior written approval by DTSC, and future tenants must provide reasonable access for O&M of vapor mitigation systems;
    - All excavation into the cap shall comply with the DTSC-approved Soil Management Plan;
    - Contaminated soils brought to the surface by grading, excavation, trenching, or backfilling shall be managed in accordance with all applicable provisions of state and federal law and a DTSC-approved Soil Management Plan; and
    - All uses and development of the site shall preserve the integrity and effectiveness of the cap.
- **Operations and Maintenance (O&M).** Site inspections are to be conducted on an annual basis to evaluate the effectiveness of the cap and ensure compliance with the Land Use Covenant(s). The O&M program will be detailed in an O&M Plan to be approved by DTSC and will generally consist of annual inspections to verify that the soil cap is not eroding, that engineered cap materials are in good condition, that unauthorized wells providing access to restricted groundwater or unauthorized excavations into impacted soil have not been constructed, and that vapor intrusion mitigation systems are operating as designed.

Remedial Design and Implementation Plan

Prior to physical site remediation, preparation of one or more Remedial Design and Implementation Plans (RDIP) for DTSC review and approval is required. The RDIP(s) will contain a detailed description of the remedial work to be performed as well as the plan for implementation. The RDIP(s) will include design drawings, a health and safety plan, procedures for minimizing fugitive dust emission, the program for monitoring air and dust during remedial construction, procedures for managing stormwater during remedial construction, an adaptive management strategy for sea level rise that provides technical justification for year 2100 protective strategies, a traffic plan for the import and off-haul of soil, and a plan for restricting OU-2 site access to authorized personnel only.

Remedial Action Plan for Operable Unit-2 (OU-2)

The San Francisco Bay RWQCB approved a Feasibility Study/Remedial Action Plan (FS/RAP) and accompanying Human Health Risk Assessment (HHRA) for the portion of the Baylands known as Operable Unit-2 (OU-2) in December 2021.[291] The OU-2 site is approximately 130 acres and occupies the southern portion of the former railyard within the Baylands (see **Figure 4.13-1**).

The FS/RAP establishes remedial action objectives for OU-2 that consist of site-specific, quantitative goals defining the extent of cleanup required to achieve the appropriate level of protectiveness for human health and the environment along with media-specific cleanup levels for:

- **Soil:** arsenic, lead, TPH-d in Zones 1, 2, 3, 5, and 6; lead and TPH-d in Zone 4; and PCE, TCE, cis-1.2-DCE, and vinyl chloride in soil in CVOC area.
    - *Remedial Action Objective:* Prevent exposure to soil with COPCs at concentrations exceeding cleanup levels by eliminating the exposure pathway for future receptors, which include incidental ingestion, inhalation of windblown dust particles, and dermal contact.
- **Soil vapor (based on groundwater evaluation):** benzene and vinyl chloride sitewide, and PCE, TCE, cis-1.2-DCE, and vinyl chloride in CVOC area, CVOCs (1,1-dichloroethene; cis-1,2-dichloroethene; trans-1,2-dichloroethene; tetrachloroethene; trichloroethene; and vinyl chloride)
    - *Remedial Action Objective:* Prevent exposure to volatile organic compounds (VOCs) in soil vapor at concentrations that exceed the cleanup levels for soil vapor by blocking or minimizing the vapor intrusion pathway.

[291] The approved Feasibility Study/Remedial Action Plan can be found at https://www.baylandsou2.com/.

- **Groundwater (vapor intrusion pathway only):** benzene and vinyl chloride sitewide, and PCE, TCE, cis-1.2-DCE, and vinyl chloride in CVOC area groundwater.
    - *Remedial Action Objective:* Prevent exposure to VOCs in groundwater by eliminating inhalation risks through the vapor intrusion pathway and preventing ingestion and dermal contact through the use of groundwater for potable and agricultural purposes.

Fire Safety Requirements

State Fire Regulations

State fire regulations set forth in Section 13000 et seq. of the California Health and Safety Code include regulations concerning building standards (as also set forth in the California Building Code), fire protection and notification systems, fire protection devices such as extinguishers and smoke alarms, high-rise building and childcare facility standards, and fire suppression training. The state fire marshal enforces these regulations and building standards in all state-owned buildings, state-occupied buildings, and state institutions throughout California.

California Fire Code (Chapter 33, Fire Safety during Construction and Demolition)

California Fire Code Chapter 33 related to fire safety during construction and demolition prescribes safeguards to provide reasonable safety to life and property from fire during such operations. Specific safeguards relate to oil-fired heaters, gas heaters, refueling, smoking, waste disposal, welding, electrical, flammable, and combustible odors; water supply for fire protection; and fire extinguishers. Implementation of these safeguards is designed to reduce the potential for fire-related hazards during construction and demolition activities.

School Site Safety Requirements

California Code of Regulations (CCR) Title 5, Section 14010 sets forth California Department of Education safety criteria[292] for school site locations, including:

c. The property line of the site even if it is a joint use agreement as described in subsection (o) of this section shall be at least the following distance from the edge of respective power line easements:
    1. 100 feet for 50–133 kV line.
    2. 150 feet for 220–230 kV line.
    3. 350 feet for 500–550 kV line.

[292] The full listing of the Department of Education's school location, design, and safety criteria can be found in Draft EIR Section 4.17.2.

d. If the proposed site is within 1,500 feet of a railroad track easement, a safety study shall be done by a competent professional trained in assessing cargo manifests; frequency, speed, and schedule of railroad traffic; grade; curves; type and condition of track need for sound or safety barriers; need for pedestrian and vehicle safeguards at railroad crossings; presence of high-pressure gas lines near the tracks that could rupture in the event of a derailment; and preparation of an evacuation plan. In addition to the analysis, possible and reasonable mitigation measures must be identified.

e. The site shall not be adjacent to a road or freeway that any site-related traffic and sound level studies have determined will have safety problems or sound levels which adversely affect the educational program.

f. Pursuant to Education Code sections 17212 and 17212.5, the site shall not contain an active earthquake fault or fault trace.

g. Pursuant to Education Code sections 17212 and 17212.5, the site is not within an area of flood or dam inundation unless the cost of mitigating the flood or inundation impact is reasonable.

h. The site shall not be located near an above-ground water or fuel storage tank or within 1500 feet of the easement of an above-ground or underground pipeline that can pose a safety hazard as determined by a risk analysis study, conducted by a competent professional, which may include certification from a local public utility commission.

i. The site is not subject to moderate to high liquefaction or landslides.

k. The site shall be easily accessible from arterial roads and shall allow minimum peripheral visibility from the planned driveways in accordance with the Sight Distance Standards established in the "Highway Design Manual," Table 201.1, published by the Department of Transportation, July 1, 1990, edition, and incorporated into this section by reference, in toto.

l. The site shall not be on major arterial streets with a heavy traffic pattern as determined by site-related traffic studies including those that require student crossings unless mitigation of traffic hazards and a plan for the safe arrival and departure of students appropriate to the grade level has been provided by city, county or other public agency in accordance with the "School Area Pedestrian Safety" manual published by the California Department of Transportation, 1987 edition, incorporated into this section by reference, in toto.

m. Existing or proposed zoning of the surrounding properties shall be compatible with schools in that it would not pose a potential health or safety risk to students or staff in accordance with Education Code Section 17123 and Government Code Section 65402 and available studies of traffic surrounding the site.

u. If the proposed site is on or within 2,000 feet of a significant disposal of hazardous waste, the school district shall contact the Department of Toxic Substance Control for a determination of whether the property should be considered a Hazardous Waste Property or Border Zone Property.

v. At the request of the governing board of a school district, the State Superintendent of Public Instruction may grant exemptions to any of the standards in this section if the district can demonstrate that mitigation of specific circumstances overrides a standard without compromising a safe and supportive school environment.

c. Regional Plans Programs, and Regulations

San Mateo County Hazardous Materials Business Plan Program

Businesses must complete a Hazardous Materials Business Plan for the safe storage and use of chemicals. Firefighters, health officials, planners, public safety officers, health care providers, and others rely on the Business Plan in an emergency. The intent of the Business Plan is to prevent or lessen damage to the health and safety of people and the environment when a hazardous material is released.

The Business Plan must include:

- Owner/operator information, including emergency contacts;
- The type and quantity of reportable hazardous materials;
- A site map;
- Spill prevention procedures;
- Emergency response procedures;
- An employee training program; and
- Record-keeping procedures.

In general, a business must submit a Business Plan to the County if it handles and/or stores a hazardous material equal to or greater than the minimum reportable quantities. These quantities are 55 gallons for liquids, 500 pounds for solids, and 200 cubic feet (at standard temperature and pressure) for compressed gases. Radioactive materials and extremely hazardous substances are reportable in any amount.

Bay Area Air Quality Management District Asbestos Regulations

Because asbestos has been proven to cause serious and fatal diseases, it is strictly regulated in its use as a building material and where it occurs naturally.

Asbestos Demolition and Renovation Program

The Bay Area Air Quality Management District (BAAQMD) regulates the demolition and renovation of buildings and structures that may contain asbestos, and the manufacture of materials known to contain asbestos. The BAAQMD must be notified at least 10 business days before any demolition project or any renovation involving the removal of 100 square feet or more, 100 linear feet or more, or 35 cubic feet or more of asbestos.

Naturally Occurring Asbestos Program

To reduce public exposure to naturally occurring asbestos, the BAAQMD regulates all construction and mining activities that produce dust potentially containing naturally occurring asbestos. The Airborne Toxic Control Measure places requirements on the following activities in areas where naturally occurring asbestos is likely to be found:

- Road construction and maintenance;
- Construction and grading; and
- Quarrying and surface mining.

Comprehensive Airport Land Use Compatibility Plan for the Environs of San Francisco International Airport

Airport Land Use Commissions are required by state law in counties where there is an airport operated for the benefit of the general public. The purpose of such commissions is to protect public health, safety, and welfare by ensuring the orderly development of airports and the adoption of land use measures that minimize the public's exposure to excessive noise and safety hazards to the extent that areas around public airports are not already devoted to incompatible uses. The City/County Association of Governments of San Mateo County (C/CAG) Board of Directors, which is the designated Airport Land Use Commission for San Mateo County, adopted a Comprehensive Airport Land Use Compatibility Plan for the Environs of San Francisco International Airport in November 2012.

As indicated in the Airport Land Use Compatibility Plan, the Baylands Specific Plan area is located more than 2 miles from the nearest public airport (San Francisco International Airport [SFO]) or airstrip and is not located within the SFO Airport Safety Compatibility Zone, FAA Notification Area, Airport Imaginary Surface area per 14 CFR Part 77, or the 65 decibel (dB) noise contour. The Airport Land Use Compatibility Plan does not identify any land use restrictions within the Baylands due to its location in relation to SFO.

The Specific Plan area is, however, identified in the Airport Land Use Compatibility Plan as being within that airport's Airport Influence Area A – Real Estate Disclosure Area. Anyone

offering real property for lease or sale is thus required to provide the following disclosure statement.

> ***NOTICE OF AIRPORT IN VICINITY***
>
> *This property is presently located in the vicinity of an airport, within what is known as an airport influence area. For that reason, the property may be subject to some of the annoyances or inconveniences associated with proximity to airport operations (for example: noise, vibration, or odors). Individual sensitivities to those annoyances can vary from person to person. You may wish to consider what airport annoyances, if any, are associated with the property before you complete your purchase and determine whether they are acceptable to you.*

San Francisco Bay Area Regional Emergency Coordination Plan

The Bay Area Regional Emergency Coordination Plan was prepared by the California Office of Emergency Services, the nine Bay Area counties (as well as Santa Cruz County), and the cities of Oakland and San Jose to provide a framework for collaboration and coordination during regional emergencies. The Regional Emergency Coordination Plan defines procedures for regional coordination, collaboration, decision making, and resource sharing among emergency response agencies in the Bay Area. The Regional Emergency Coordination Plan also provides critical linkages to ensure that existing Bay Area emergency response systems work together effectively during the response to an event.

d. City of Brisbane Plans, Ordinances, and Regulations

Brisbane General Plan

General Plan policies and programs relevant to hazards and hazardous materials issues raised by the Baylands development are identified below.

Chapter X: Community Health and Safety Element

This General Plan chapter contains the following relevant policies and programs:

> **Policy 166:** Protect the community's health, safety, welfare, natural resources and property through regulation of the handling and storage of hazardous materials, with specific focus on prevention of accidents.
>
> *Program 1661a:* In connection with any application for a proposed specific plan or land use development project involving biotechnical research activities, determine the nature and extent of any regulations that should be adopted to protect the public health and safety before any such specific plan or land use development application is approved.

Policy 168: Encourage the County of San Mateo to establish a safe collection station for hazardous wastes from households and small businesses that is convenient and accessible to Brisbane citizens, as addressed in the Household Hazardous Waste Element of the Integrated Waste Management Plan.

Policy 172: Establish that it is of the highest priority that contaminated lands in Brisbane be remediated.

Program 172c: Require private property owners to remediate contaminated lands consistent with state and federal requirements.

Program 172d: Continue to maintain good communications and working relationships with the CalEPA DTSC, the RWQCB and other agencies regulating remedial actions.

Policy 173: The City shall not grant approval of a development project on a contaminated site unless a plan for remediation of the site has first been approved and adopted by all Federal, State and local agencies having jurisdiction over the remediation plan.

Policy 174: Include the remediation requirements of Federal, State and local agencies in the process of making determinations on land use designations and development applications.

Program 174a: Take into account risk assessments and other technical studies prepared by governmental agencies when making land use determinations for contaminated lands.

Program 174b: Condition all final approval of development projects on full compliance with all orders, remediation programs and mitigation measures imposed by regulatory agencies.

Program 174c: Require applicants to provide for analysis by environmental engineers, toxicologists or other technical specialists deemed necessary by the City to process development applications and complete environmental review for projects on contaminated lands.

Policy 175: Assure that any development otherwise permitted on lands filled with municipal waste is safe by implementing the following programs.

Program 175b: Require evidence that scientific testing and verification has taken place to the satisfaction of regulatory agencies.

Program 175c: Encourage property owners of filled lands to complete all testing and related requirements of the federal, state and local agencies well in advance of requesting land use permits from the City.

Chapter XII: Policies and Programs by Subarea

This General Plan chapter contains the following relevant policies:

Policy BL.1: Development within the Baylands Subarea shall be subject to the City's approval of a single specific plan for the entirety of the Baylands Subarea and a development agreement that is consistent with General Plan policies, incorporates all applicable EIR mitigation measures, and is consistent with the following standards:

A. The single specific plan and development agreement subject to City review and approval referenced above shall include:

- Detailed plans for Title 27 compliant closure of the landfill and Remedial Action Plans for OU-1 and OU-2 that have been approved by all appropriate regulatory agencies, which include, but shall not be limited to, CalRecycle, the San Mateo County Environmental Health Department, the California Department of Toxic Substances Control, the California Regional Water Quality Control Board;
- A specific schedule establishing the time frames by which (i) the landfill must be closed in full compliance with Title 27 and (ii) the remediation of OU-1 and OU-2 must be completed; and
- Specific means by which the City may enforce the applicant's adherence to the schedule for closure and remediation and specific consequences, e.g., monetary penalties, suspension of building permits, etc., that the City may impose on the applicant for failing to adhere to the schedule.

C. All residential development shall be designed and remediated to accommodate ground level residential uses and ground level residential-supportive uses such as daycare, parks, schools, playgrounds, and medical facilities.

F. Sufficient assurances for the satisfactory ongoing performance of site remediation and site development (e.g., site monitoring, performance bonds, environmental insurance) shall be provided as determined by the City.

K. Prior to the issuance of a grading permit to export soil or move soil from the existing landfill area for incorporation in a remediation or grading plan, the soil shall be tested in a manner approved by the City.

Policy BL.6: Establish a safety buffer around and provide for visual screening of the Tank Farm.

Policy BL.29: Disclose, in a risk analysis, all hazardous materials to be utilized in research and development and biotechnical research, the assumptions that were used, and methods of safe handling and disposal. The City has a concern with and may exclude research and

development and biotechnical research uses which involve high use or generation of hazardous materials and/or do not address public safety in handling and disposal to the City's satisfaction.

Municipal Code Section 13.06.142, Clean-Up of Spilled or Accidentally Discharged Wastes

Brisbane Municipal Section 13.06.142 requires any person "delivering, hauling, disposing, storing, discharging or otherwise handling hazardous materials or potentially polluting substances, solid or liquid, such as, but not limited to the following: fuel oil, gasoline, solvents, industrial liquids or fluids, milk, grease trap and catch-basin wastes, oil or petroleum wastes, shall immediately clean up any such spilled materials or substances to prevent such materials or substances becoming a hazard to health or safety or, directly or indirectly, permitting such materials or substances to enter the city's storm sewer system."

Emergency Operations Plan

The Brisbane Emergency Operations Plan (EOP) outlines the authorities, organizational structures, and procedures that the City will use to coordinate planning, response, recovery, and prevention activities related to local emergencies and disasters. Because Brisbane and the surrounding region are susceptible to a number of hazards such as natural disasters and human-caused events, as well as technological failures and public health threats, the City's EOP uses an "all-hazards" approach to prepare for, respond to, recover from, and mitigate (to the extent possible) all potential hazards and critical incidents.

The primary purpose of the EOP is to:

1) Provide the framework, concepts, and policies that will ensure the effective management and coordination of the City's response to major emergencies and disasters.
2) Identify roles and responsibilities for City departments as they pertain to preparedness, response, recovery, and mitigation activities.
3) Codify the City's understanding and adoption of state and federal policies and guidance through which operational coordination, mutual aid, and other requests for support will be integrated.
4) Serve as a foundational document for supporting City plans, as well as support emergency plans of other governments, CBOs, and others (e.g., private businesses, etc.).
5) Comply with state and federal laws and regulations such as the California Emergency Services Act.[293]

[293] California Emergency Services Act (Chapter 7 of Division 1 of Title 2 of the Government Code).

The EOP serves as the foundational document for the City's emergency management activities. While all City resources may be called upon as needed, specific departmental responsibilities are outlined in the EOP. To ensure the City is adequately prepared, all City departments are required to actively participate in preparedness and planning activities including preparation and review of departmental plans, policies, procedures, resource information, and contact information as necessary to fulfill their assigned roles and obligations.

The EOP is based on the Federal Emergency Management Agency's (FEMA's) "Whole Community" approach to emergency management and therefore recognizes the roles of special districts, non-government organizations, faith-based organizations, private-sector businesses, educational organizations, and other stakeholders in addition to City resources. Additionally, the EOP is intended to reflect the wide variety of support that may be required by residents, visitors, and businesses, including people with disabilities and others with access or functional needs.

The EOP addresses the four phases of emergency management:

- Preparedness for an emergency (activities undertaken prior to an emergency in order to improve the City's ability to coordinate, respond, and recover from a critical incident);
- Response to an emergency (actions taken immediately before, during, or directly after a critical incident in order to minimize the potential or existing impacts of the incident);
- Recovery from an emergency (damage assessment, short-term and long-term recovery activities, and administration of recovery assistance programs); or
- Mitigation of the potential for emergencies (actions and measures taken to reduce or eliminate the degree of long-term risk from natural and technological hazards).

The EOP is organized as follows:

- Part I: Basic Plan (also referred to as the "EOP") presents the planning assumptions, policies, and concept of operations that guide the responsibilities for emergency preparedness, response, recovery, and mitigation for the City of Brisbane.
- Part II: Hazard Annexes: There are a number of City plans, procedures and other documents that support or relate to this Basic Plan. These plans provide additional detail and guidance for specific hazards, functions, or operations.
    - Earthquake
    - Storm/Flood
    - Wildfire

- Supporting Plans
    - Emergency Operations Center Manual (includes Emergency Operations Center Position Checklists)
    - San Mateo Countywide Local Hazard Mitigation Plan

4.13.4 SIGNIFICANCE CRITERIA

The following criteria were used to determine the significance of hazards and hazardous materials impacts:

Threshold HAZ-1: The Baylands Specific Plan would cause a significant impact if it would create a substantial hazard to the public or the environment due to the release of hazardous materials into the environment as the result of:

- **Inherent risks involved in the routine transport, use, disposal, or management of hazardous or potentially hazardous materials by Baylands-related construction activities or by uses permitted by the Specific Plan;**
- **Failure to comply with approved regulatory requirements for (1) remediation of Operable Unit OU-SM or Operable Unit OU-2; or (2) the Title 27 landfill closure plan for the former Brisbane Landfill; or**
- **Reasonably foreseeable upset or accident conditions.**

Threshold HAZ-2: The Baylands Specific Plan would cause a significant impact if it would create a public health hazard due to location of a school:

- **Within one-quarter mile of hazardous emissions or handling of hazardous or acutely hazardous materials, substances, or waste;**
- **Closer to powerline easements than:**
    - **100 feet of a 50-133 kV line;**
    - **150 feet of a 220-230 kV line; or**
    - **350 feet of a 500-550 kV line;** [294]
- **Within 1,500 feet of a railroad track easement;**[9]
- **Located adjacent to a roadway or freeway where traffic or noise studies have identified safety problems**[9]**;**

[294] CCR Title 5, Section 14010

- **Having an earth fault or fault trace within the site[9];**
- **Located on a site subject to flood or dam inundation hazards[9];**
- **Nearby an above-ground water or fuel storage tank, or within 1,500 feet of an easement for an underground pipeline that could cause a safety hazard[9];**
- **Within 2,000 feet of a significant hazardous waste disposal site[9];**
- **For which existing or proposed zoning of surrounding properties inconsistent with the school's location[9];**
- **That would require students to cross one or more heavily traveled roadways without implementation of a safe routes to school plan; or**
- **That would expose students to:**
  - **Health risk greater than 10 in 1,000,000;**
  - **An Acute Hazard or Chronic Hazard Index greater than 1.0; or**
  - **An Annual Average $PM_{2.5}$ Concentration greater than 0.3 μg/m³.[295]**

Threshold HAZ-3: **The Baylands Specific Plan would cause a significant impact if it would create a substantial hazard to the public or the environment as the result of locating site-specific development or Baylands-related off-site infrastructure on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.**

Threshold HAZ-4: **The Baylands Specific Plan would cause a significant impact if it would permit development inconsistent with the adopted *Comprehensive Airport Land Use Compatibility Plan for the Environs of San Francisco International Airport* and thereby result in a safety hazard or excessive noise for people residing or working in the Specific Plan area due to aircraft operations.**

Threshold HAZ-5: **The Baylands Specific Plan would cause a significant impact if it would impair:**

- **Preparedness for an emergency (activities undertaken prior to an emergency in order to improve the City's ability to coordinate, respond, and recover from a critical incident);**

[295] These health risk exposures are analyzed in Section 4.9, *Air Quality*.

- **Response to an emergency (actions taken immediately before, during, or directly after a critical incident in order to minimize the loss of life, injury, and property damage from the incident);**
- **Recovery from an emergency (damage assessment, short-term and long-term recovery activities, and administration of recovery assistance programs); or**
- **Mitigation of the potential for emergencies (actions and measures taken to reduce or eliminate the degree of long-term risk from natural and technological hazards).**

4.13.5 PROJECT IMPACTS AND MITIGATION MEASURES

a. Impact HAZ-1: Risks Involved in Transport, Use, Disposal, and Management of Hazardous Materials

Methodology for Determining Significance

The assessment of risks involved in the routine transport, use, disposal, and management of hazardous materials associated with Baylands development focuses on hazards that would be encountered during construction and operation of Specific Plan-related structures and land uses.

Routine Transport, Use, Storage, or Disposal of Hazardous Materials

Impact HAZ-1 addresses day-to-day (routine) transport, use, storage, and disposal of hazardous or potentially hazardous materials that would occur as the result of construction (including demolition of existing structures) and operation of Specific Plan-related residential, commercial, and other uses, as well as infrastructure. While Chapter 3, *Project Description*, identifies the types of land uses proposed within the Baylands, the individual businesses and specific activities that will ultimately locate and operate within the Baylands cannot be known at this time. The extent to which individual Baylands activities and future uses would use hazardous materials, nor can the specific hazardous materials, amounts, and locations that would be used and stored, or how specifically they would be used, also cannot be known at this time.

Because the precise amounts and types of hazardous materials transport, storage, use, and disposal by future Baylands uses cannot be precisely known, qualitative analysis is undertaken based on the following reasonable assumptions:

- All Baylands demolition, grading, and construction activities, as well as future uses would involve the routine transportation, storage, use, and disposal of hazardous materials to some degree with the potential for release of hazardous materials into the environment.

- General commercial, retail, hotel, and household hazardous materials are typically handled and transported in small quantities, although some uses such as a hardware store would store materials such as paints and solvents in larger quantities. In addition, the health effects associated with materials common to office and retail uses are generally not as serious as industrial or laboratory uses.
- Laboratory and medical-related establishments such as biotechnical firms, medical laboratories, doctor/dentist offices, or pharmacies would receive, store, and use medical- or laboratory-type chemicals, compressed gases, pharmaceuticals, and radiological materials. Medical, biohazardous, and low-level radioactive wastes would also be produced from these activities.
- Baylands development would comply with federal, state, and local regulations that are designed to ensure the safety of routine transport, use, storage, and disposal of hazardous materials.

Regulatory Requirements for (1) Remediation of Operable Unit OU-SM or Operable Unit OU-2; or (2) the Title 27 Landfill Closure Plan

Analysis of Impact HAZ-1 also recognizes that development would be required to comply with the approved regulatory requirements for site remediation and final landfill closure within the Baylands during demolition, site grading, and construction activities, as well as during post-construction operation of Baylands land uses and infrastructure. Regulatory approvals for site remediation of Operable Units OU-SM and OU-2, as well as Title 27 final landfill closure include measures determined to be necessary for the protection of future use of the Baylands based on existing hazards, applicable standards for environmental and public health, and requirements for site remediation and landfill closure. Baylands development was therefore analyzed in relation to site remediation and landfill closure plan requirements for future development and land uses within the Baylands. Compliance by future development with those requirements would be indicative of a less-than-significant impact.

Upset or Accident Conditions

While federal, state, and local regulations designed to ensure the safety of routine transport, use, storage, and disposal of hazardous materials minimize the potential for risk of upset, the analysis of Impact HAZ-1 recognizes that the risk of upset exists and that accidents can and do happen.

In determining the level of significance related to reasonably foreseeable upset or accident conditions, the analysis recognizes that demolition, site grading, and construction activities as well as future Baylands uses would be required to comply with relevant federal, state, and local laws and regulations that are designed to minimize the potential for upset or accident conditions, and to protect public health and safety from release of hazardous materials.

Impact Assessment

Routine Transport, Use, Disposal, and Management of Hazardous Materials during Demolition and Construction Activities

Construction activities would include demolition and removal of existing buildings within the Specific Plan area and use of hazardous materials during site grading and construction of new buildings, structures, infrastructure, and other features of Baylands development. The potential for exposure of the public or the environment to hazardous materials due to the routine transport, use, management, storage, and disposal of hazardous materials during these construction activities is addressed below.

Exposure to Hazardous Materials in Existing Buildings during Demolition

Baylands development would include demolition of approximately 272,400 square feet of existing on-site industrial buildings of varying ages, including structures built prior to 1978 that could contain hazardous building materials. Exposure to hazardous building materials, including asbestos-containing materials, lead-based paint, polychlorinated biphenyls (PCBs), mercury, and other hazardous materials, would occur during demolition and disposal activities, potentially resulting in adverse health effects. Once structures containing such materials have been removed, there would be no further exposure to these materials during operation of Baylands development. Hazardous materials generated from demolition of existing on-site industrial buildings would also require disposal in one of the three Class I landfills in California.[296]

Existing federal, state, and local regulations require structures subject to demolition or renovation that may disturb or require the removal of materials that consist of, contain, or are coated with asbestos-containing materials, lead-based paint, PCBs, mercury, or other hazardous materials to be inspected and/or tested for the presence of such materials. Further, all hazardous materials must be managed, hauled, and disposed of in accordance with applicable laws and regulations designed to protect the public and the environment from exposure to hazardous materials.

The identification, removal, hauling, and disposal of asbestos-containing materials is regulated by 8 CCR sections 1529 and 5208. The identification, removal, and disposal of lead-based paint is regulated by CFR Title 29, Section 1926.62 and 8 CCR section 1532.1. For both asbestos-containing materials and lead-based paint, all work must be conducted by a state-certified professional. If asbestos-containing materials and/or lead-based paint are determined to exist on-site, a site-specific hazard control plan must be prepared and submitted to the appropriate

[296] https://www.waterboards.ca.gov/water_issues/programs/land_disposal/walist.html identifies the only Class I landfills in California as Clean Harbors-Buttonwillow (Kern County), Chem Waste Management-Kettleman (Kings County), and Safety Kleen (Laidlaw) (Imperial County).

agency detailing removal methods and specific instructions for providing protective clothing and equipment for abatement personnel (BAAQMD for asbestos and Cal/OSHA for lead). If necessary, a state-certified lead-based paint and/or an asbestos removal contractor would be required to be retained to conduct the appropriate abatement measures. Waste from abatement and demolition activities would be disposed of at a landfill(s) licensed to accept such waste. Once all abatement measures have been implemented, the contractor would conduct a clearance examination and provide written documentation to the City that testing and abatement have been completed in accordance with all federal, state, and local laws and regulations.

The identification, removal, and disposal of PCBs is regulated under the Toxic Substances Control Act (Title 40, Chapter 1, Subchapter R, Part 761) and State of California regulations (22 CCR 66263.44). Electrical transformers and older fluorescent light ballasts that have not previously been tested and verified to be free of PCBs must be tested. If PCBs are detected above action levels, the materials must be disposed of at a licensed facility permitted to accept the materials. Upon completion of abatement measures, if applicable, the contractor would be required to provide written documentation to the City that testing and abatement have been completed in accordance with all federal, state, and local laws and regulations.

In the case of mercury in fluorescent light tubes and switches, identification, removal, and disposal are regulated under 22 CCR sections 67426.1–67428.1 and 66261.50. Under these regulations, the light tubes must be removed without breakage and disposed of at a licensed facility permitted to accept the materials. Upon completion of abatement measures, if applicable, the contractor is required to provide written documentation that testing and abatement have been completed in accordance with all federal, state, and local laws and regulations.

Existing abatement laws and regulations, combined with enforcement mechanisms by agencies including the BAAQMD and Cal/OSHA, require compliance with applicable federal, state, and local laws and regulations that would prevent the exposure of individuals and the environment to hazards during demolition of structures built before newer regulatory requirements were enacted (1978 for lead-based paint and PCBs, 1981 for asbestos-containing materials, and 2004 for mercury in fluorescent lighting).

Exposure to Hazardous Materials during Site Grading and Construction

Baylands grading and on- and off-site construction activities would also require the use of hazardous materials such as fuels, oils, and lubricants for construction equipment and electrical cable pulling; paints and thinners; and solvents and cleaners. These hazardous materials are typically packaged in consumer quantities, used, and stored in accordance with manufacturer recommendations, and would be transported to and from the Baylands. When not in use, hazardous materials needed for construction would be stored in designated construction staging areas in compliance with federal, state, and local requirements. The volume of stored materials in any one place would be small (i.e., generally less than 25 gallons) and would be the

minimum necessary to carry out construction activities. Maintenance, fueling, and servicing of construction vehicles would occur off-site, such as at a pre-existing gas station or service center.

Hazardous materials needed for construction would be stored and used in accordance with the product specifications and applicable regulations that are described in detail on Material Safety Data Sheets (MSDS) that accompany every batch of materials considered hazardous. Information in the MSDS includes instructions on proper use and application of the material, accidental release measures, and handling and storage requirements. Applicable regulations specify storage and handling requirements, such as proper container types and usage methods.

Transportation of hazardous materials is regulated by the United States Department of Transportation (USDOT) and the California Department of Transportation (Caltrans). Together, federal and state agencies determine driver-training requirements, load labeling procedures, and container specifications designed to minimize the exposure of hazardous materials. In addition, businesses that use hazardous materials, including construction companies, are required to prepare and implement Hazardous Materials Business Plans describing procedures for the handling, transportation, generation, and disposal of hazardous materials. As the Certified Uniform Program Agency (CUPA), the San Mateo County Environmental Health Services Division[297] would be responsible for ensuring compliance with these regulations including, but not limited to, the Hazardous Waste Control Act, the Hazardous Waste Generator Program, the Hazardous Materials Release Response Plans and Inventory Program, the California Accidental Release Prevention Program, and the Above-Ground Storage Tank Program.

Lead within the Former Police Shooting Range on Icehouse Hill

The United States Environmental Protection Agency (USEPA) reports that lead can be introduced into the environment at shooting ranges in one or more of the following three pathways, each of which is site-specific and may or may not occur at any given range:

- Lead oxidizes when exposed to air and dissolves when exposed to acidic water or soil.
- Lead bullets, bullet particles, or dissolved lead can be moved by stormwater runoff.
- Dissolved lead can migrate through soils to groundwater.

Birds are also in danger of lead poisoning from soil contaminated with spent lead shot. Large waterfowl and birds of prey routinely swallow beakfuls of dirt or grit. Lead pellets that are swallowed can build up and lead to lead poisoning.

Since site-specific clean-up of the former police shooting range on the southerly slope of Icehouse Hill has not been undertaken, nor is it explicitly planned by the landowner, lead and

[297] The San Mateo County Environmental Health Services Division was designated by the State Secretary for Environmental Protection as the Certified Unified Program Agency (CUPA) for San Mateo County in 1996.

other contaminants[298] could be encountered on ground surfaces as well as within soils during construction of trails and the relocation of the Mission Blue Nursery to Icehouse Hill, exposing the public to health hazards.

While there are no specific requirements for remediation of shooting ranges, the USEPA has developed guidelines for the reclamation of firing ranges:

1. Sift munitions fragments from the soil and recycle them.
2. Analyze samples of the remaining soil to determine how much contamination has leached away. If leachable levels of lead are below the approved EPA limit, no further action is needed. Proper testing methods must be used.
3. Analyze the soil in layers to assess the extent of downward contamination.
4. Treat or dispose of contaminated soil in a hazardous waste landfill or use on-site stabilization, solidification, and soil washing techniques to the extent permitted by state and local regulation.

Routine Transport, Use, Disposal, or Management of Hazardous Materials by Baylands Land Uses and Infrastructure Operations

Baylands development is proposed as a mixed-use community with residential, commercial/ retail, habitat restoration and recreational uses, public facilities, and infrastructure, all of which would involve the presence of hazardous materials (or products containing hazardous materials) at varying levels. Baylands commercial, retail, and hotel activities would use hazardous chemicals that are common in commercial, retail, and hotel settings, including familiar materials such as toners; paints; lubricants; kitchen and restroom cleaners; refrigerants associated with building mechanical and heating, ventilation, and air conditioning (HVAC) systems; and other maintenance materials. The relocated fire station would include an above-ground 1,000-gallon fuel storage tank.

General commercial, retail, hotel, and household hazardous materials are typically handled and transported in small quantities that would not require preparation of a business plan, although some uses such as a hardware store would store materials such as paints and solvents in sufficient quantities to require preparation of a business plan.[299] In addition, the health effects associated with materials common to office/commercial uses are generally not as serious as

[298] Some types of ammunition can also release toxic metals, such as mercury, into the environment. Corrosive mercury-based primers are found in many types of old ammunition as well as vintage military surplus ammunition.

[299] A business would be required to submit a Hazardous Materials Business Plan if it would handle and/or store a hazardous material (e.g., flammable liquids and solids, petroleum-based products, such as motor oil, gasoline and diesel fuel; acids and bases, such as pool chemicals and drain cleaners; paints; inks; fertilizers) in an amount equal to or greater than the minimum reportable quantities. These quantities are 55 gallons for liquids, 500 pounds for solids, and 200 cubic feet (at standard temperature and pressure) for compressed gases.

industrial or laboratory uses. For commercial, retail, and hotel uses, additional regulatory requirements include adherence to instruction on manufacturers' labels, and appropriate training of employees in the use, storage, and disposal of the hazardous materials and wastes they are expected to encounter in the workplace.

In addition to typical office-based businesses, future Baylands commercial development could include businesses and facilities engaging in medical and laboratory-based activities. These could include doctor/dentist offices and "dry" laboratories (or operations), where relatively small or negligible quantities of hazardous materials would be used. "Wet" lab functions, on the other hand, could involve a broad spectrum of activities involving use of hazardous materials in controlled indoor environments. The types and volumes of hazardous materials that would be used in wet laboratories are difficult to predict and speculative because the specific businesses that might move to the Baylands cannot be known at this time, and because hazardous materials use is subject to continuous change as technologies evolve and as businesses change.

Research, laboratory, and biotechnical operations would be subject to more intense federal, state, and local regulation and oversight than typical households and commercial, retail, and hotel businesses that handle smaller quantities of more common materials. Employees performing wet laboratory work would be required by law to receive specific training in the use and handling of hazardous materials, which is intended to protect the workplace and also to minimize the potential for spills or inadvertent releases.

Laboratory and medical-related establishments operating within the Baylands such as biotechnical firms, medical laboratories, doctor/dentist offices, or pharmacies would involve medical- or laboratory-type chemicals, compressed gases, pharmaceuticals, and radiological materials. Medical, biohazardous, and low-level radioactive wastes would also be produced from these activities. Such uses are required to comply with federal and state regulations and standards, including measures such as preparation of a spill prevention, control, and countermeasure plans. Laboratory and medical-related establishments would be more likely to handle and/or store a hazardous material equal to or greater than minimum reportable quantities than office/commercial, residential, or other Baylands uses and would be required to prepare Hazardous Materials Business Plans tailored to their specific operations. These measures would reduce the potential for hazardous materials release during the routine transport, use, or disposal of such materials.

Disposal of biohazardous materials (e.g., medical waste,[300] cell plates, and absorbents) that might be generated by future businesses within the Baylands would be required to comply with applicable federal, state, and local regulations to ensure their safe handling and disposal. These materials, along with pharmaceutical and chemotherapy wastes and surgery specimens, would be required to be transported off-site for treatment and disposal by a licensed medical waste

[300] Medical wastes generated could include blood and blood products, tissues and specimens, needles, and infectious items.

treatment vendor. The Environmental Management Branch of the California Department of Public Health regulates the generation, handling, storage, treatment, and disposal of medical waste by providing oversight for the implementation of the Medical Waste Management Act.[301]

The relocated fire station would have a 1,000-gallon fuel storage tank and may store other hazardous materials in amounts equal to or greater than the minimum reportable quantities. It is also possible that future laboratory uses within the Bayland would handle and/or store hazardous materials in amounts equal to or greater than the minimum reportable quantities. Such uses would be required to prepare a Hazardous Materials Business Plan.

Grounds and landscape maintenance within the Baylands would also use a wide variety of commercial products formulated with hazardous materials, including fuels, cleaners and degreasers, solvents, paints, lubricants, adhesives, sealers, and pesticides/herbicides. These common consumer products would be used for the same purposes as in any landscape maintenance setting. Small quantities of household hazardous materials including cleaning products, fuels, oils, pesticides, and lubricants would also be associated with Baylands residential development.

Consistency with Remedial Action Plans for Operable Unit OU-SM and Operable Unit OU-2; Consistency with the Title 27 Landfill Closure Plan

The Remedial Action Plans for OU-SM and OU-2 outline a series of land use restrictions governing future construction to which Baylands development will comply. Key among these provisions in relation to site construction are the following:

- Baylands grading operations will move sufficient soil from the eastern portion of the Baylands to raise final pad elevations for development within the western portion to cap existing soil containing constituents of concern. Any future excavation into the cap would require compliance with a regulatory agency-approved Soil Management Plan;
- Any contaminated soil brought to the surface by grading, excavation, trenching, or backfilling would require compliance with all applicable provisions of state and federal law and a regulatory agency-approved Soil Management Plan;
- Baylands development would be subject to and required to comply with land use covenants that will be established by regulatory agencies and recorded on the title to properties within OU-SM and OU-2 as part of the remediation process. These covenants would limit human exposures to contaminants left in place in soil, soil vapor, and groundwater above levels considered protective of unrestricted use of the site.
    - No occupied buildings, including sensitive uses, would be permitted, where CVOC concentrations in soil vapor exceed cleanup levels without regulatory

[301] https://www.cdph.ca.gov/Programs/CEH/DRSEM/Pages/EMB/MedicalWaste/MedicalWaste.aspx.

agency approval based on either (1) a risk assessment demonstrating site conditions pose no significant risk to human health, or (2) engineering controls, such as building design or gas intrusion mitigation systems, that will reduce the risk to an acceptable level;

- No growing produce or vegetables for human consumption in native soil would be permitted. Plants for human consumption would be permitted to be grown in raised beds (above Baylands soils) containing non-native soil. Trees producing edible fruit (including trees producing edible nuts) would be only if they are grown in containers with a bottom that prevents the roots from penetrating into native soil;
- No extraction or use of underlying groundwater would be permitted without a Groundwater Management Plan pre-approved by the appropriate regulatory agency;
- No drilling for any water, oil, or gas, or extraction or removal of groundwater would be permitted without a regulatory agency-approved Groundwater Management Plan and prior written approval by the appropriate regulatory agency;
- No interference with, or modification of, a vapor mitigation system would be permitted without prior written approval by the appropriate regulatory agency, and future tenants must provide reasonable access for O&M of vapor mitigation systems;
- All excavation into the cap would be required to comply with the regulatory agency-approved Soil Management Plan;
- Any contaminated soils that may be brought to the surface by grading, excavation, trenching, or backfilling would be required to be managed in accordance with all applicable provisions of state and federal law and a regulatory agency-approved Soil Management Plan; and
- All uses and development of the site would be required to preserve the integrity and effectiveness of the cap provided over contaminated soils.

The landfill closure plan includes the following measures over which Baylands development within the eastern portion of the site will be constructed:

- A landfill cover is to be constructed as specified in the approved Closure and Post-Closure Maintenance Plan consisting of the following layers from the bottom up:
  - Foundation layer that is a minimum of 2 feet over the last lift of waste with appropriate engineering properties to provide low permeability;
  - Low-hydraulic-conductivity layer with a minimum 2 percent slope.

    - Drainage layer to facilitate drainage of water infiltrating from above the final cover and convey it to wetland areas or drainage facilities.
    - Erosion-resistant engineered fill layer to accommodate appropriate root depths, utilities, and shallow foundations. All irrigated areas would contain a subdrain beneath the vegetative layer of the final cover.
- A landfill gas intrusion mitigation system consisting of a vapor barrier and a gas venting system layer will underlay commercial building footprints.

Baylands development will be required to be constructed such that roots of vegetation, utilities, and shallow foundations are accommodated within the erosion-resistant layer.

In addition, continuous methane monitoring systems will be maintained within the buildings as required by Title 27 to ensure that there is no hazard due to the accumulation of levels of landfill methane gas above 5,000 parts per million by volume (ppmv).

Exposure to Hazardous Materials Due to Accident or Risk of Upset Conditions

Improper transportation, use, storage, or disposal of hazardous materials during construction or post-construction operations could result in accidental spills or releases, posing health risks to workers, the public, and the environment.

Baylands Construction and Post-Construction Activities

Construction and post-construction activities associated with Baylands development include:

- Site grading, trenching for underground utilities, building pad construction, or landscape installation, which could expose contaminated soils within the western portion of the site or the waste matrix within the former Brisbane Landfill.
- Accidental damage to existing utility lines and disruption of service when undergrounding existing above-ground electrical lines within the Baylands; tunneling under Bayshore Boulevard, along Geneva Avenue, and within the Martin Substation while extending electrical lines; and when trenching for installation of on-site utilities within the Baylands and for off-site water improvements.

- Realignment of Lagoon Road and demolition/removal of the existing roadway along with site grading and construction of lagoon shoreline improvements in the vicinity of existing underground Kinder Morgan fuel lines.[302]
    - Future improvements at the lagoon waterfront may require additional material to be placed on top of the existing fuel lines to accommodate Baylands site grading and provide waterfront protection.
    - Baylands development could generate settlement that could encroach into the Kinder Morgan fuel pipeline easement.[303]
- Temporary dewatering in areas of shallow groundwater would be undertaken prior to completion of required groundwater remediation activities, which would expose workers, the public, and the environment to contaminated groundwater.
- Short-term use and storage of materials within construction sites during the construction day, which could result in spills of various hazardous materials and expose workers, the public, and the environment to those materials.
- Storage and handling of hazardous materials in commercial areas (general commercial, retail, hotel), research and other laboratory settings, and medical facilities, which could result in spills of various hazardous materials and expose workers, the public, and the environment to those materials.
- Vehicular accidents during delivery to or disposal from Baylands construction sites and ongoing post-construction activities, which could result in hazardous materials spills and expose workers, the public, and the environment to those materials.
- Accidents during unloading of fuels, solvents, and other hazardous materials needed for construction and ongoing post-construction activities, along with loading of waste materials that could result in spills of various hazardous materials and expose workers, the public, and the environment to those materials.

[302] Pipeline operators are required by law to post brightly colored markers along their right-of-way to indicate the presence of their underground pipelines. Markers contain information about the nearby pipeline as well as emergency contact information. To ensure safety and avoid damage, anyone planning to dig or excavate is also required by law to contact the Underground Service Alert center at least 48 hours in advance so that utility operators, including Kinder Morgan, can coordinate with the contractor to avoid any close contact with the pipeline. To minimize damage and facilitate closing down a line in the event of an accident, pipelines are monitored 24 hours per day, 7 days per week both at Brisbane Terminal and at Kinder Morgan's regional headquarters in Orange, California, as well as by a "Supervisory Control and Data Acquisition" computer system, which gathers real-time current operating conditions data, including pipeline pressures, volume, flow rates, status of pumping equipment and valves, and temperatures, and can react to any sudden changes should they occur.

[303] Buried pipelines, being constrained by the bedding material and soil surrounding them, can withstand high-vibration intensities (Oriard 1994; Siskind and Stagg 1993); cited in Caltrans *Transportation and Construction Vibration Guidance Manual*, April 2020). Caltrans did not therefore include vibration criteria for protection of pipelines in its manual.

In addition, the transportation, use, storage, and disposal of hazardous materials following site construction by Baylands land uses and infrastructure is subject to numerous federal, state, and local regulations designed to minimize exposure to hazardous materials and protect public health and the environment.

However, as noted above, accidental release of hazardous materials is addressed by federal, state, and local regulations, including the following:

- Title 29 of the Code of Federal Regulations (29 CFR), which requires special training of handlers of hazardous materials; notification to employees who work in the vicinity of hazardous materials; acquisition from the manufacturer of material safety data sheets, which describe the proper use of hazardous materials; and training of employees to remediate any hazardous material accidental releases.
- Safety and Health Regulations for Construction (29 CFR 1926.65 Appendix C), which contains requirements for construction activities, including occupational health and environmental controls to protect worker health and safety. The guidelines describe the health and safety plan(s) that must be developed and implemented during construction, including associated training, protective equipment, evacuation plans, chains of command, and emergency response procedures.
- Article 1 of Chapter 6.95 of the California Health and Safety Code (Sections 25500–25520), which requires that any business that handles, stores, or disposes of a hazardous substance at a given threshold quantity prepare a Hazardous Materials Business Plan to minimize hazards to human health and the environment from fires, explosions, or an unplanned release of hazardous substances into air, soil, or surface water.[304] The Hazardous Materials Business Plan must be carried out immediately whenever a fire, explosion, or unplanned chemical release occurs. Hazardous Materials Business Plans serve as an aid to employers and employees in managing emergencies and help better prepare emergency response personnel for handling a wide range of emergencies that might occur at any specific location. The San Mateo County Environmental Health Services Division, acting as the Certified Unified Program Agency, oversees implementation of this program in San Mateo County.

Kinder Morgan Tank Farm and Pipeline

The Kinder Morgan Bulk Terminal facility stores large quantities of hazardous materials that are delivered by pressurized liquid pipelines that traverse the Baylands to the facility. Upset and accident conditions could result in the release of large quantities of gasoline, diesel, or jet

[304] In general, a business must submit a Hazardous Materials Business Plan to the County if it handles and/or stores a hazardous material equal to or greater than the minimum reportable quantities. These quantities are 55 gallons for liquids, 500 pounds for solids, and 200 cubic feet (at standard temperature and pressure) for compressed gases. Radioactive materials and extremely hazardous substances are reportable in any amount.

fuel that might potentially adversely affect residents, workers, visitors, or the environment. However, the storage tanks are constructed, monitored, inspected, and upgraded as necessary in accordance with American Petroleum Institute recommendations (API Standard 620 Design and Construction of Large, Welded, Low-Pressure Storage Tanks and API Standard 650 Welded Tanks for Oil Storage). The tanks are kept at atmospheric pressure and any damage would result in leakage rather than an explosion. Secondary containment improvements incorporated into the facility design would ensure that, in the unlikely event of leakage, including substantial damage from an earthquake, any released fuels would remain at the terminal within the containment areas. The tanks are on a regular inspection schedule, including major inspections in which the tanks are emptied, and all components inspected and upgraded as necessary to limit the potential for any releases.

As noted above, the pipelines are pressurized and continuously monitored by trained operators and a computerized system that can react to any sudden changes. The Pipeline and Hazardous Materials Safety Administration (PHMSA) is the primary federal regulatory agency responsible for ensuring that pipelines are safe, reliable, and environmentally sound. The federal pipeline integrity management regulations for hazardous liquid pipelines (Section 195.452) and natural gas pipelines (Sections 192.901-192.951) require operators to perform risk assessments of their pipelines to:

- Ensure that integrity assessment methods (internal inspection, pressure testing, direct assessment, etc.) are employed to address significant threats on pipeline segments.
- Ensure that integrity assessments of the highest risk segments are scheduled with priority over lower risk segments.
- Ensure that assessments of threats and potential consequences are conducted to define, evaluate, and implement additional measures that address significant threats to the pipeline (e.g., conducting depth-of-cover surveys and correcting any deficiencies), or reduce potential consequences of failures (e.g., installing additional valves on the pipeline to reduce the amount of liquid or gas that might be released should a failure occur).

Significance Conclusion for Impact HAZ-1

Routine Transport, Use, Disposal, or Management of Hazardous Materials During Demolition and Construction Activities

As discussed above, a comprehensive set of federal, state, and local laws and regulations regulate the transportation, use, management, and disposal of hazardous materials and wastes to minimize potential risks of human and environmental exposure during site grading and construction of buildings, infrastructure, and site amenities, avoiding exposure of people and the environment. These programs also provide for training of workers to react to and contain

accidental hazardous materials spills and other exposures to hazardous materials. In addition, the design and construction activities involved with undergrounding of electrical lines, installation of renewable energy generation and battery storage facilities, and installation of service connections and connections to the Martin Substation would comply with applicable codes, California Public Utilities Commission and Independent System Operator Rules and Regulations, and PG&E requirements. Thus, with the exception of lead within the former shooting range on Icehouse Hill, impacts would be less than significant. However, because clean-up of the former shooting range is addressed by EPA guidelines rather than mandatory requirements, exposure to lead within the former firing range would be significant and require mitigation.

Routine Transport, Use, Disposal, or Management of Hazardous Materials by Operation of Baylands Land Uses and Infrastructure

Proposed Baylands development would primarily consist of residential, commercial/office, public, and open space uses that would not transport, use, store, or dispose of large quantities of hazardous materials that could present a substantial risk to people. Uses such as hardware stores, laboratories, and the relocated fire station that would store hazardous materials in amounts greater than minimum reportable quantities would be required to prepare Hazardous Materials Business Plans tailored to their specific operations. Implementation of the Hazardous Materials Business Plans would reduce the potential for hazardous materials release during the routine transport, use, or disposal of such materials would therefore not present a substantial risk. Impacts would be less than significant.

Consistency with Remedial Action Plans for Operable Unit OU-SM and Operable Unit OU-2; Consistency with the Title 27 Landfill Closure Plan

Baylands development would be required to comply with the requirements of Remedial Action Plans for Operable Unit for OU-SM and Operable Unit OU-2, restricting human interaction with contaminated soils or groundwater. Construction of buildings and infrastructure within the eastern portion of the Baylands will also comply with applicable Title 27 Closure and Post-Closure Maintenance Plan requirements. Thus, Baylands development would have a less-than-significant impact.

Upset or Accident Conditions

Grading and construction activities in the vicinity of the Kinder Morgan pipelines include the potential of accidental loading or undermining of soils covering and underlying the pipeline, causing damage to the pipeline. Because current grading and development plans do not include specific provisions for protecting the structural integrity of the pipeline, a significant impact would result from Baylands development.

Program EIR Mitigation Measures

MM HAZ-1a: Confirm Achievement of Remediation Goals (Program EIR 4.G-2a). Prior to issuance of a building or grading permit for any parcel within OU-SM, OU-2, and the former landfill, the applicant shall provide the City with evidence that the Department of Toxic Substances Control (DTSC), Regional Water Quality Control Board (RWQCB), and/or the San Mateo County Environmental Health Division as the Local Enforcement Agency in relation to the landfill have approved Remedial Design and Implementation Plan(s) or final closure and post-closure maintenance plans for the area subject to the requested permit.

Prior to issuance of a building permit for any parcel within the Baylands, the project applicant shall obtain regulatory approval from the Department of Toxic Substances Control (DTSC), Regional Water Quality Control Board (RWQCB), and/or the San Mateo County Environmental Health Division as the Local Enforcement Agency in relation to the landfill for the proposed land use, in the form of a Remediation Action Completion Report or equivalent closure letter stating that remediation goals have been achieved for proposed land uses.

MM HAZ-1b: Soil and Groundwater Management Plan (Program EIR Mitigation Measure 4.G-2b). Prior to issuance of a building or grading permit for any parcel within the Baylands, a Soil and Groundwater Management Plan shall be prepared by a qualified environmental consulting firm, reviewed, and approved by DTSC and the RWQCB, and implemented by the applicant.

The Soil and Groundwater Management Plan shall also include a requirement for development and implementation of site-specific safety plans to be prepared prior to commencement of construction consistent with Occupational Safety and Health Administration (OSHA) Safety and Health Standards 29 Code of Federal Regulation (CFR) 1910.120, as well as management of groundwater produced through temporary dewatering activities.

Such site-specific safety plans shall include necessary training, operating and emergency response procedures, and reporting requirements to regulate all activities that bring workers in contact with potentially contaminated soil or groundwater, landfill gas, or leachate to ensure worker safety and avoid impacts on the environment. Further, the Soil and Groundwater Management Plan shall include protocols for any areas of the site that require excavation and relocation of refuse material (e.g., building foundations and utility infrastructure) in accordance with Title 27 of the California Code of Regulations to ensure that the integrity of the low-hydraulic-conductivity layer requirements is maintained.

MM HAZ-1c: Master Deconstruction and Demolition Plan (Program EIR Mitigation Measure 4.G-2c). City review and approval of a specific plan per the requirements of the Brisbane General Plan shall be completed prior to submittal of any application for a demolition permit within the Project Site. Prior to issuance of a demolition permit for any parcel within the Baylands, the applicable property owner shall submit a Master Deconstruction and Demolition Plan prepared by a licensed professional to the City Building Official. The plan shall be reviewed and approved by the Building Official prior to issuance of the requested demolition permit. The demolition plan shall include documentation of hazardous materials determinations (surveys) and demolition or deconstruction recommendations in accordance with local and state requirements. If the surveys conducted by licensed professionals prior to issuance of a demolition permit per the requirements above hazardous building materials, demolition or deconstruction shall proceed in accordance with applicable Bay Area Air Quality Management District (BAAQMD), OSHA, and California Occupational Safety and Health Administration (Cal/OSHA) requirements, which may include air permits or agency notifications, worker awareness training, exposure monitoring, medical examinations, and a written respiratory protection program.

MM HAZ-1d: Former Police Shooting Range Cleanup (Program EIR Mitigation Measure 4.G-2i). Prior to any construction of trails on the southerly slope of Icehouse Hill, best management practices for lead removal consistent with United States Environmental Protection Agency Circular EPA-902-B-01-001, *Best Management Practices for Lead at Outdoor Shooting Ranges*, Revised June 2005, shall be implemented.

Significance Conclusion for Impact HAZ-1 with Implementation of Program EIR Mitigation Measures

Mitigation Measures MM HAZ-1a, MM HAZ-1b, MM HAZ-1c, and MM HAZ-1d would ensure implementation of General Plan policy and address impacts not addressed through compliance with applicable federal, state, and regional hazardous materials regulatory requirements.

However, a significant impact could occur because Mitigation Measure MM HAZ-1d only addresses remediation for construction of trails on the southerly slope of Icehouse Hill and does not address additional remediation for other construction on Icehouse Hill, including relocation of the Mission Blue Nursery to the site of the former police shooting range. In addition, the Kinder Morgan fuel pipelines could be damaged during construction. Both of these impacts would be significant and require additional mitigation.

Additional Mitigation Measures

MM HAZ-1e: Shooting Range Remediation. Prior to any construction activities on Icehouse Hill where lead fragments from the former police shooting range may be found, the following shall be implemented consistent with United States Environmental Protection Agency Circular EPA-902-B-01-001, *Best Management Practices for Lead at Outdoor Shooting Ranges*, Revised June 2005:

1. Prepare an exhibit along with supporting technical information for review and approval by the Brisbane Police Department identifying all areas where lead fragments from the former police shooting range on Icehouse Hill may be found.
2. Within those areas identified where lead fragments from the former police shooting range might be found, sift munitions fragments from the soil for recycling.[305]
3. Sample and analyze the remaining soil in layers to assess the extent of downward contamination to determine if the leachable level is at or above the United States Environmental Protection Agency (USEPA) limit of 5 milligrams per liter (mg/L). If it does not exceed the limits, the soil can be left in place with no further action required. If the USEPA limit is exceeded, remediation subject to oversight by the appropriate regulatory agency—San Mateo County Environmental Health Services Division or DTSC—shall be required prior to relocation of the Mission Blue Nursery to the site.

MM HAZ-1f: Kinder Morgan Fuel Pipeline. Existing infrastructure for the Kinder Morgan Tank Farm shall be protected in place during Baylands grading and construction consistent with the following requirements and specifications.

A Construction Workplan shall be developed with Kinder Morgan to document construction means and methods, including provisions for appropriate construction techniques, settlement monitoring, and setbacks to protect the structural integrity of existing pipeline facilities in accordance with the following performance standards.

- Any fill materials placed within 100 feet of any Kinder Morgan pipeline easement shall avoid additional loading on existing Kinder Morgan fuel lines and avoid settlement of soils supporting pipelines unless required

[305] Recycling the fragments makes them exempt from hazardous waste reporting and management requirements.

by a state or regional regulatory authority in an approved site remediation or landfill closure plan.[306]

- Excavation activities within 25 feet of a Kinder Morgan fuel pipeline easement shall be designed to ensure the integrity of manufactured slopes within the excavation at all times.
- Temporary construction dewatering for excavations below groundwater levels shall be performed in a controlled manner and avoid prolonged drawdown of the groundwater table (exceeding one month).

Prior to issuance of a grading or construction permit for activities within 100 feet of a Kinder Morgan fuel pipeline easement, the applicant for such permit shall demonstrate to the satisfaction of the City Engineer that adequate measures will be implemented to ensure the structural integrity of existing pipeline facilities is protected, including measures such as, but not limited to, physical separation of construction activities, fill, and buildings from pipeline easements along with implementation of Mitigation Measure MM NOI-5b, Protection of Underground Utilities.

The Construction Workplan shall be subject to review and approval by the City of Brisbane prior to commencement of grading within 100 feet of any Kinder Morgan pipeline easement.

Significance Conclusion for Impact HAZ-1 with Implementation of All Mitigation Measures

Mitigation Measure MM HAZ-1a ensures implementation of General Plan policy requiring completion of site remediation and landfill closure prior to development within the Baylands. Mitigation Measures MM HAZ-1b and MM HAZ-1c address impacts not addressed through compliance with applicable federal, state, and regional hazardous materials regulatory requirements. MM HAZ-1c provides for clean-up of the former police shooting range consistent with USEPA guidelines not included in mandatory hazardous materials requirements for the construction of trails on the southerly slope of Icehouse Hill. Mitigation Measure MM HAZ-1d provides for remediation of the former police shooting range, which would require identifying all areas where lead fragments from the former police shooting range on Icehouse Hill may be found. MM HAZ-1e would protect Kinder Morgan fuel pipelines from risk of upset during site construction. Thus, the combination of compliance with applicable federal, state, and regional

[306] As noted in Footnote 11, Caltrans' *Transportation and Construction Vibration Guidance Manual*, April 2020, does not recommend vibration criteria for protection of pipelines since buried pipelines, being constrained by the bedding material and soil surrounding them, can withstand high-vibration intensities.

hazardous materials regulatory requirements and Mitigation Measures MM HAZ-1a through MM HAZ-1e- would reduce impacts to less than significant with mitigation incorporated.

b. Impact HAZ-2: Emissions or Handling of Hazardous or Acutely Hazardous Materials or Waste within One-Quarter Mile of a School

Methodology for Determining Significance

Analysis of this impact focuses on the potential for Baylands development, including a proposed middle school, to result in hazardous emissions or handling of hazardous or acutely hazardous materials within 0.25 mile of an existing or proposed school. The potential severity of consequences to people or property at school facilities in the event of a release of hazardous materials into the environment from operation of proposed residential and commercial uses is analyzed.

In determining the level of significance, the analysis recognizes that Specific Plan development, including establishment of a school within the Specific Plan area, would be required to comply with relevant federal, state, and local laws and regulations that are designed to minimize emission or release of hazardous or acutely hazardous materials into the environment, particularly within 0.25 mile of an existing or proposed school.

Threshold HAZ-2 supplements the CEQA Guidelines Appendix G screening threshold, recognizing that the location of a facility that emits hazardous emissions or handles hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school indicates the *potential* for a significant environmental effect but is not necessarily indicative of a significant physical environmental effect. Thus, Threshold HAZ-2 therefore first examines whether a potential health hazard might exist due to the location of a facility emitting or handling hazardous materials within one-quarter mile of an existing or proposed school. If such a condition would occur, analysis is undertaken to determine whether a public health hazard would result. Threshold HAZ-2 also recognizes that such a public health hazard would be created in one of two ways:

1. Creating a change in the physical environment by placing a facility that emits hazardous emissions or handles hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school; or
2. Creating a health hazard for students by placing a school within one-quarter mile of an existing facility that emits hazardous emissions or handles hazardous or acutely hazardous materials, substances, or waste.

Threshold HAZ-2 also recognizes the school safety standards set forth in CCR Title 5, Section 14010, Standards for School Site Construction, which sets performance standards for the protection of schools within the state from environmental hazards and risks of upset. As such,

exceeding the performance standards of CCR Title 5, Section 14010 without mitigation would be indicative of a significant impact.

Impact Assessment

Location of a School within One-Quater Mile of a Site That Would Handle or Emit Hazardous or Acutely Hazardous Materials, Substances, or Waste

The Baylands Specific Plan includes development of a middle school to be constructed on an approximately 5- to 7-acre site along Main Street east of Bayshore Boulevard (see **Figure 3-9** and **Figure 3-10**). The area within which the school might be constructed is more than 0.25 mile from the Kinder Morgan Tank Farm, and there are no other existing facilities within 0.25 mile of the school site that would handle or emit hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of the site.

In addition to mandatory adherence to federal, state, and local requirements, compliance with the requirements of CCR Title 5, Section 14010, Standards for School Site Construction and California Department of Education School Facilities Planning Division as overseen by DTSC, would further ensure that hazardous materials impacts on any school within 0.25 mile of Baylands development would be minimized by ensuring selection of a school site that provides safety and supports learning, per the regulations.

Proposed School Locations in Relation to California Department of Education Title 5 Distance Criteria for Environmental Hazards

Table 4.13-3 evaluates the location of the proposed middle school in relation to the safety criteria for school site locations provided in CCR Title 5, Section 14010.

Table 4.13-3: Evaluation of Proposed Baylands Middle School Location in Relation to CCR Title 5, Section 14010 Environmental Safety Criteria

Criterion	Evaluation of Proposed Middle School Location
c. Location of powerline easements within: 1. 100 feet of a 50–133 kV line; 2. 150 feet of a 220–230 kV line; or 3. 350 feet of a 500–550 kV line.	PG&E owns a 230 kilovolt (kV) underground electrical transmission line along Bayshore Boulevard, which would be within 150 feet of the proposed school site. The proposed school's location is more than 1,000 feet from PG&E's Martin Substation. Overhead electrical powerlines connecting Baylands development to the substation would be located more than 1,500 feet north of the school site.
d. Location within 1,500 feet of a railroad track easement.	The school site could be as close as 900 feet from the Caltrain rail line. Existing daily passenger rail operations are projected to increase from 92 diesel trains operating at 79 miles per hour to 248–258 electric trains operating at 110 miles per hour past the Baylands by 2040. In addition, the existing 2–4 freight operations through the Baylands are projected to increase to 7-10 trains per day. As a result, the Department of Education requires a safety evaluation of potential endangerment to school occupants from an incident (derailment or other accident) that could occur along the rail lines per Education Code Section 17521.

Criterion	Evaluation of Proposed Middle School Location
e. Location adjacent to a road or freeway that would cause noise or safety hazards.	The US 101 freeway is located more than 3,600 feet to the east of the school site. Bayshore Boulevard lies immediately adjacent to the west side of the proposed school site. Bayshore Boulevard is projected to carry 3,250 vehicles during the weekday a.m. peak hour and 3,320 vehicles day during the p.m. peak hour. Roadway noise along Bayshore Boulevard is projected to be 76.3 dBA.
f. Location on an active earthquake fault or fault trace.	No active earthquake fault or fault trace is located within the proposed school site or Baylands Specific Plan area.
g. Areas subject to flood or dam flood inundation.	The proposed school site is not subject to flood or dam inundation.
h. Location near an above-ground water or fuel storage tank within 1500 feet of the easement of an above-ground or underground pipeline that can pose a safety hazard.	The proposed school site would be located more than 2,000 feet from the nearest fuel storage tank at the Kinder Morgan tank farm and more than 1,000 feet from the water storage tank to be constructed east of the Caltrain right-of-way within the Baylands. A Pacific Gas & Electric Company (PG&E) 24-inch high-pressure natural gas transmission pipeline is located within 1,500 feet west of the proposed school site along Bayshore Boulevard.[307] The San Francisco Public Utilities Commission (SFPUC) Hetch Hetchy water pipeline system was also identified west of Bayshore Boulevard, which contains multiple large diameter water pipelines (44-inch to 60-inch) within 300 feet of the site. An existing 14-inch water pipeline appears to bisect the existing school site along Industrial Way.
i. Areas subject to moderate to high liquefaction or landslides.	Geotechnical studies prepared for the Baylands indicate that material within the artificial fill and the sandy deposits below the Young Bay Mud underlying the Baylands and the proposed middle school site would be subject to liquefaction and cyclic densification during a design seismic event.
k. Easily accessible from arterial roads and shall allow minimum peripheral visibility from the planned driveways. l. Not on a major arterial street with a heavy traffic pattern.	The proposed school site along proposed Main Street east of Bayshore Boulevard would be easily accessible from residential areas within the Baylands. Implementation of the proposed Bayshore Mobility Plan and Safe Routes Program would improve access from residential areas within Daly City west of Bayshore Boulevard since Daly City middle school students would be required to cross Bayshore Boulevard on a daily basis.
m. Compatible with surrounding zoning.	The proposed school site would be located adjacent to lower density residential and office uses, which would be compatible with the proposed middle school.
u. Within 2,000 feet of a significant disposal of hazardous waste.	The proposed school site is located more than 2,000 feet from the former Brisbane Landfill.

At the request of the governing board of a school district, the State Superintendent of Public Instruction may grant exemptions to any of the standards in this section if the district can demonstrate that mitigation of specific circumstances overrides a standard without compromising a safe and supportive school environment (5 CCR, § 14010(u)).

In relation to the PG&E underground 230 kV powerline within Bayshore Boulevard, the Department of Education has an interim policy that allows schools within the vicinity of underground lines to apply for variances to this regulation as described in the *Power Line*

[307] National Pipeline Mapping System (NPMS), 2022. Hazardous liquids pipeline map produced by the NPMS Public Viewer. Accessed October 30, 2023. https://pvnpms.phmsa.dot.gov/PublicViewer/.

Setback Exemption Guidance Policy.[308] However, the setback exemption request is only applicable for new schools that are planning to have *limited activity uses* within the setback zone.

Limited activity uses are defined as staff/visitor/joint-use parking, bus and parent drop-off parking, driveways, access roads, sidewalks, fire lanes, and landscaping. Finally, to address the safety of students crossing Bayshore Boulevard on a daily basis, the proposed Bayshore Mobility Plan provide protected crossings at Main Street and Geneva Avenue, while the Safe Routes to School program address traffic speeds, queueing and drop-off/pick-up zones, and bicycle/pedestrian routes to and from the middle school.

Significance Conclusion for Impact HAZ-2

A comprehensive set of federal, state, and local laws and requirements regulate the transportation, use, storage, and disposal of hazardous materials and wastes to reduce the potential risks of human and environmental exposure during post-construction operations of the land use types permitted within the Baylands, particularly those operations occurring within 0.25 mile of a school facility. These programs also provide for training of workers to react to and contain accidental hazardous materials spills and other exposures to hazardous materials. No significant impact would thus result in relation to proximity of facilities that handle or emit hazardous or acutely hazardous materials, substances, or waste.

However, as shown in **Table 4.13-3**, proposed middle school locations do not meet all provisions of CCR Title 5, Section 14010 because they are:

- Within 150 feet of PG&E's 230 kV underground electrical transmission line along Bayshore Boulevard.
- Within 1,500 feet of the Caltrain railroad right-of-way.
- Within 1,500 feet of a PG&E 24-inch high-pressure natural gas transmission pipeline.
- Subject to liquefaction and cyclic densification during a design seismic event.

A significant impact would therefore result.

Program EIR Mitigation Measures

MM HAZ-2: Protection of School Facilities (Program EIR Mitigation Measure 4.G-3). Grade K–12 school facilities constructed within the Baylands shall not be located within 0.25 miles of a facility with hazardous emissions or that handles hazardous or acutely hazardous materials, substances or waste, unless approved by School Facilities Planning Division of the California Department of Education in conformance with California Code of Regulations (CCR) Title 5, Section 14010,

[308] California Department of Education, *Power Line Setback Exemption Guidance*, May 2006.

which sets forth California Department of Education criteria for school site locations:

- "If the proposed [school] site is within 1,500 feet of a railroad track easement, a safety study shall be done by a competent professional trained in assessing cargo manifests, frequency, speed, and schedule of railroad traffic, grade, curves, type and condition of track need for sound or safety barriers, need for pedestrian and vehicle safeguards at railroad crossings, presence of high pressure gas lines near the tracks that could rupture in the event of a derailment, preparation of an evacuation plan. In addition to the analysis, possible and reasonable mitigation measures must be identified in accordance the referenced code." California Code of Regulations (CCR) Title 5, Section 14010 (d)
- "The [school] site shall not be located near an above-ground water or fuel storage tank or within 1,500 feet of the easement of an above ground or underground pipeline that can pose a safety hazard as determined by a risk analysis study, conducted by a competent professional, which may include certification from a local public utility commission." CCR Title 5, Section 14010 (h)

Grade K–12 school facilities shall also comply with California Education Code Sections 17210 through 17224 and related statutory provisions related to risk to human health or the environment at proposed school properties as overseen by the Department of Toxic Substances Control (DTSC). In accordance with California Education Code Sections 17210 through 17224 and related statutory provisions, the school district must prepare a Phase I Environmental Site Assessment and/or a Preliminary Endangerment Assessment (PEA) to identify potential contamination and evaluate whether it presents a risk to human health or the environment at proposed school properties as overseen by the Department of Toxic Substances Control (DTSC). The environmental investigation and any required remediation of properties to be developed for use as schools shall be overseen by DTSC in coordination with the California Department of Education and the School Facilities Planning Division.

Final design plans shall be approved by the School Facilities Planning Division of the California Department of Education prior to commencement of construction.

All required remediation within 0.25 mile of a proposed K–12 school site within the Specific Plan area shall be completed prior to occupancy of the school.

Significance Conclusion for Impact HAZ-2 Following Implementation of Program EIR Mitigation Measures

Mitigation Measure MM HAZ-2 requires the proposed middle school to meet the standards set for in CCR Title 5, Section 14010 or to prepare the required studies for review by the Department of Education and to secure approval of the proposed school site pursuant to the provisions of CCR Title 5, Section 14010(u).

Existing state and federal programs provide for protection of school sites and also provide for training of workers to react to and contain accidental hazardous materials spills and other exposures to hazardous materials. MM HAZ-2 would ensure that the proposed school site would meet the design and safety standards set forth in CCR Title 5, Section 14010 or demonstrate safety and provide mitigation for any hazards prior to approval pursuant to CCR Title 5, Section 14010(u).

The impact would therefore be less than significant with mitigation incorporated.

c. Impact HAZ-3: Development on a Hazardous Materials Site Identified Pursuant to Government Code Section 65962.5

Methodology for Determining Significance

The methodology used in this assessment includes review of database information to assess the potential presence of hazards and hazardous materials sites within and adjacent to the Baylands. The Specific Plan area was evaluated for the presence of hazardous materials based on a review of the DTSC EnviroStor database and the RWQCB GeoTracker database.

To identify the level of significance in relation to this threshold, the first step is to determine whether the Baylands or adjacent areas encompass any sites that are included on a list of hazardous materials sites or that contain unidentified/unknown contaminants. Next, the analysis recognizes that all development would be required to comply with relevant federal, state, and local laws and regulations that are designed to remediate such sites so as to protect the public health.

A significant impact would result if development would occur on a hazardous materials site that would endanger public health or the environment.

Impact Assessment

Various portions of the Baylands and adjacent areas, including the former Brisbane Landfill, OU-SM, and OU-2, are included on databases listing hazardous materials pursuant to Government Code Section 65962.5. The Schlage Lock site (also known as “Baylands North”), immediately north of the Baylands, is also listed as a hazardous materials site. These sites have

a long history of environmental investigation and cleanup efforts with additional remediation activities approved by state regulatory agencies (DTSC and the RWQCB) to ensure that all remediation is completed to levels that protect human health and the environment.

Pursuant to applicable state and local requirements, remediation and landfill closure activities must be completed to the satisfaction of state regulatory agencies prior to development of affected aeras within the Baylands. As outlined in approved Remedial Action Plans for OU-SM and OU-2, as well as the final closure plan for the former Brisbane Landfill, site remediation and landfill closure will be completed in phases, allowing for phased development of the Baylands. As discussed in Impact HAZ-1, Baylands development would be consistent with approved site remediation and landfill closure plans and would occur only after remediation or landfill closure activities for the site-specific development area have been completed.

The only location within which off-site infrastructure would be constructed on a listed hazardous materials site compiled pursuant to Government Code Section 65962.5 is the PG&E Martin Substation, which is subject to regulatory oversight related to past cleanup activities. As described in Section 3.3.2 g, improvements associated with this substation would be minor, such as installing line disconnect switch and line coupling capacitor voltage transformers along with a fiber termination, compliant with PG&E specifications. See Impact HAZ-1 for discussion of the potential for construction activities within and adjacent to the Martin Substation to expose workers and the environment to contaminated soils and other risks of upset.

Significance Conclusion for Impact HAZ-3

Various portions of the Specific Plan area, including the former Brisbane Landfill, OU-SM, and OU-2, are included on databases listing hazardous materials pursuant to Government Code Section 65962.5. Baylands development would be consistent with approved site remediation and remediation and landfill closure would occur prior to Baylands development. In addition, the only off-site location where Baylands-related off-site infrastructure is proposed is the PG&E Martin Substation, which is subject to regulatory oversight related to past cleanup activities. Thus, the potential for exposure of workers, the public, and the environment to hazardous materials within sites included on databases listing hazardous materials pursuant to Government Code Section 65962.5 would be less than significant.

d. Impact HAZ-4: Safety or Noise Hazards Due to Aircraft Operations

Methodology for Determining Significance

The first test in evaluating whether a significant impact would occur is to determine whether any portion of the Specific Plan area is within an airport land use plan or within 2 miles of a public airport for which an airport land use plan has not been adopted. Within these areas, a significant impact would result if the Specific Plan would place new development within an

airport safety zone, permit building heights that would pierce an "imaginary surface" of an airport, include a concentration of development inconsistent with an Airport Land Use Compatibility Plan, or propose new residential development within a 65 decibel (dB) Community Noise Equivalent Level (CNEL) noise contour. As stated in the San Mateo Airport Land Use Commission's Resolution 12-67 adopting the SFO airport land use compatibility plan, the plan sets forth "land use compatibility policies that are consistent with the state's noise standards" and would "prevent the creation of new noise and safety problems." Thus, consistency of proposed development with Airport Land Use Compatibility Plan policies would be indicative of less-than-significant impacts.

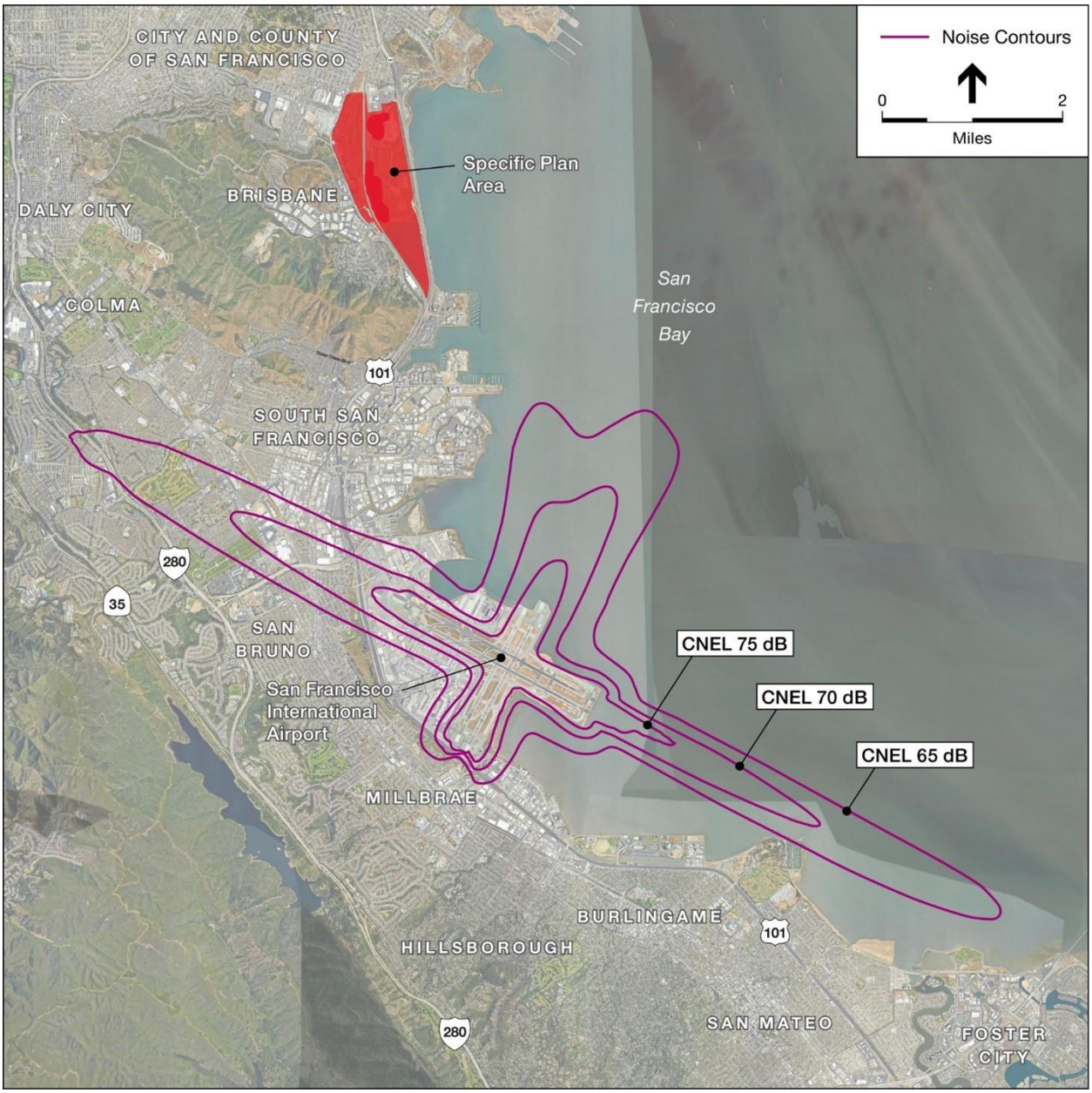
Impact Assessment

As indicated in the Airport Land Use Compatibility Plan for the Environs of San Francisco International Airport (SFO), the Baylands Specific Plan area is located 4 miles north of SFO and is not located within the 65 dB noise contour of the airport (see **Figure 4.13-4**). The Specific Plan area is not within 2 miles of any other airport or airstrip.

As indicated in the Airport Land Use Compatibility Plan, the Baylands Specific Plan area is not located within an Airport Safety Compatibility Zone (see **Figure 4.13-5**), FAA Notification Area (see **Figure 4.13-6**), or Airport Imaginary Surface area (see **Figure 4.13-7**). The Airport Land Use Compatibility Plan does not therefore identify any land use restrictions due to the location of the Baylands in relation to SFO. The Baylands site is, however, within SFO's Airport Influence Area A – Real Estate Disclosure Area, which requires any person or entity offering real property for lease or sale to provide an airport disclosure statement. Anyone offering real property for lease or sale is thus required to provide the following disclosure statement:

> ***NOTICE OF AIRPORT IN VICINITY***
>
> *This property is presently located in the vicinity of an airport, within what is known as an airport influence area. For that reason, the property may be subject to some of the annoyances or inconveniences associated with proximity to airport operations (for example: noise, vibration, or odors). Individual sensitivities to those annoyances can vary from person to person. You may wish to consider what airport annoyances, if any, are associated with the property before you complete your purchase and determine whether they are acceptable to you.*

Figure 4.13-4: San Francisco International Airport Existing Noise Contours



SOURCE: ESA, 2023.

Figure 4.13-5: Airport Safety Compatibility Zones

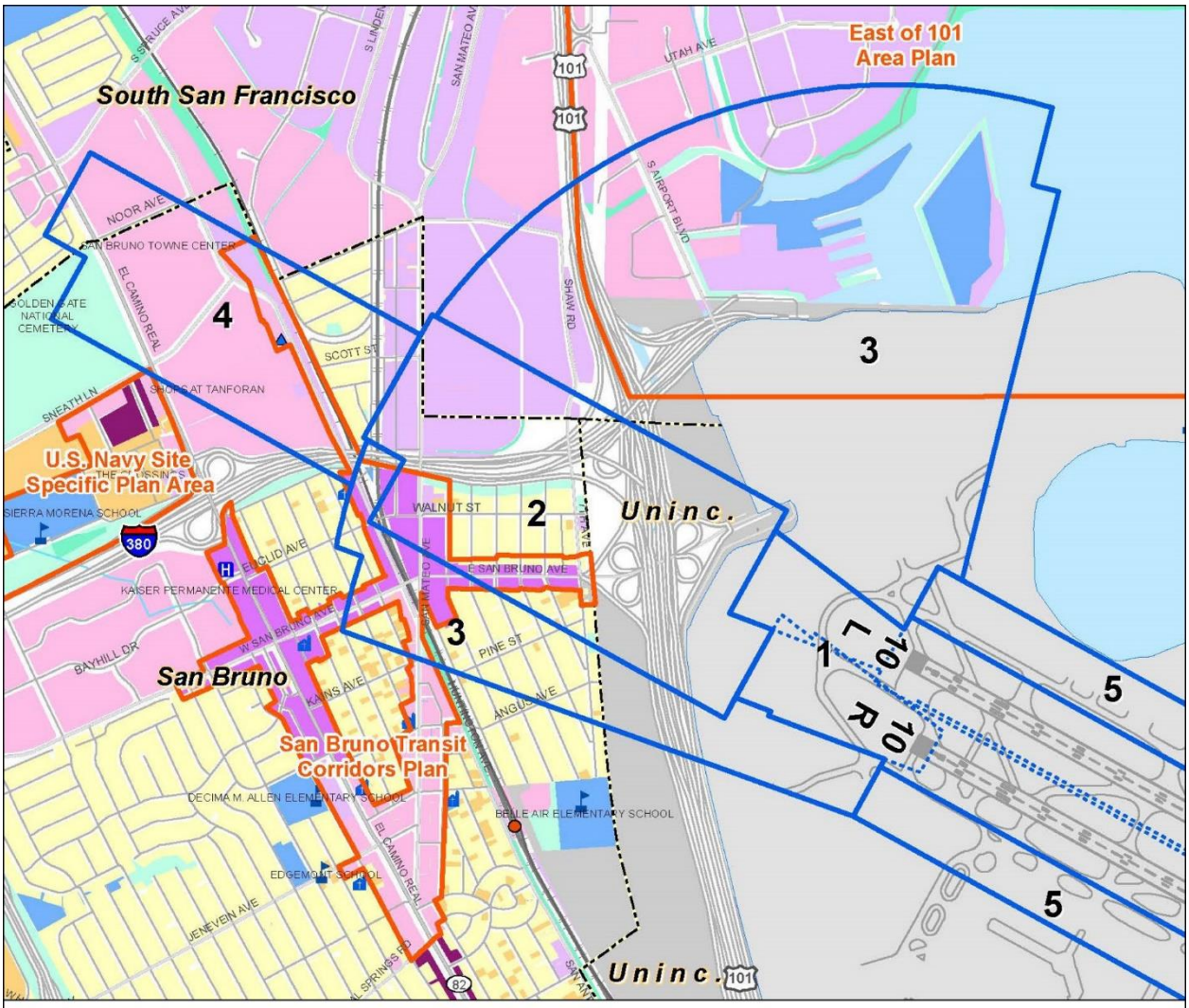
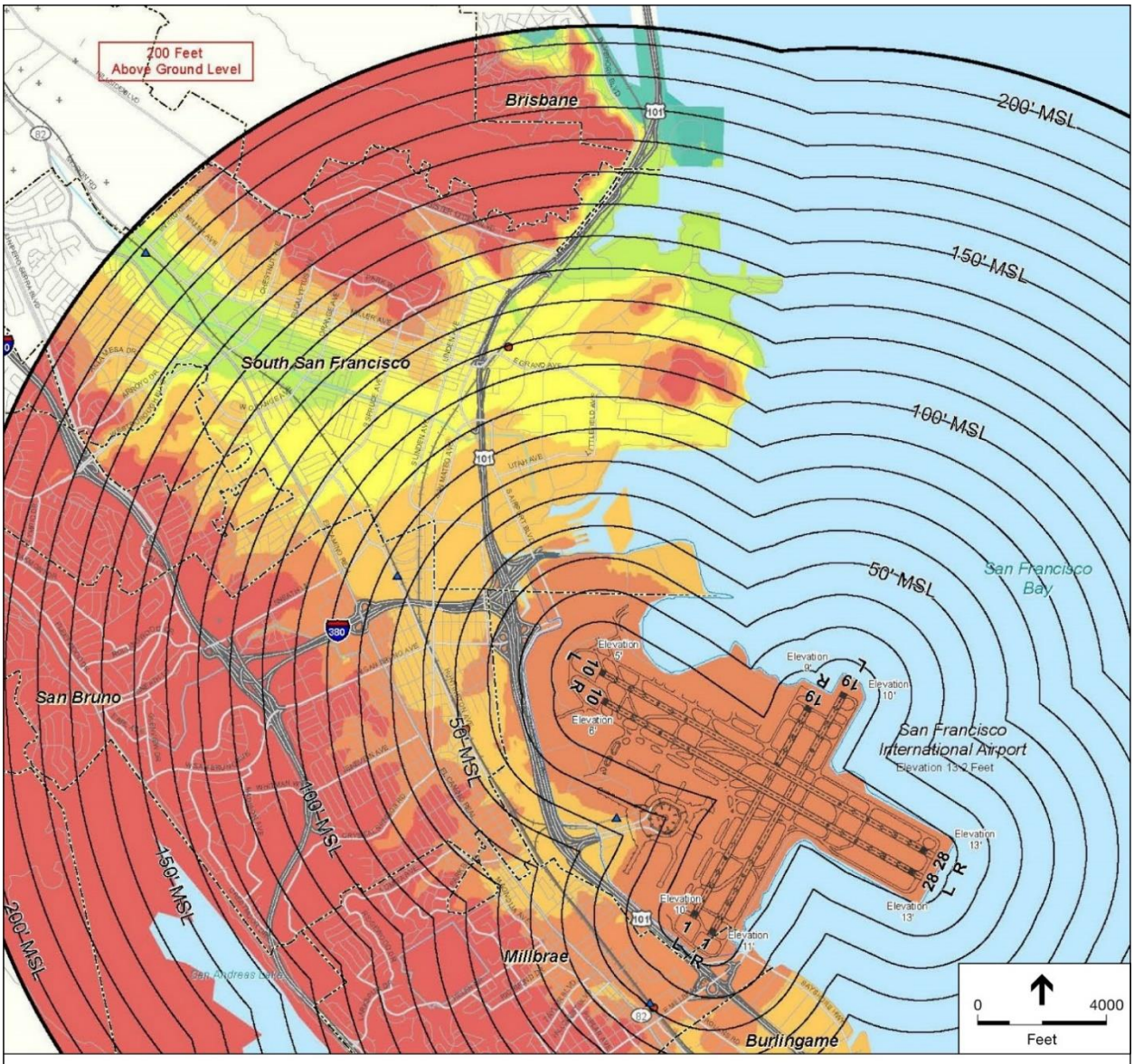


Figure 4.13-6: FAA Notification Area



FAA NOTIFICATION REQUIREMENTS

A structure proponent must file FAA Form 7460-1, Notice of Proposed Construction or Alteration, for any proposed construction or alteration that meets any of the following Notification Criteria described in 14 CFR Part 77.9: §77.9(a): A height more than 200' above ground level (AGL) at its site; §77.9(b): Within 20,000' of a runway more than 3,200' in length, and exceeding a 100:1 slope imaginary surface (i.e., a surface rising 1' vertically for every 100' horizontally) from the nearest point of the nearest runway.

The 100:1 surface is shown as follows: 20,000' Limit from Nearest Runway; 100' MSL Elevation Above Mean Sea Level

Heights of 100:1 Surface Above Ground (AGL)

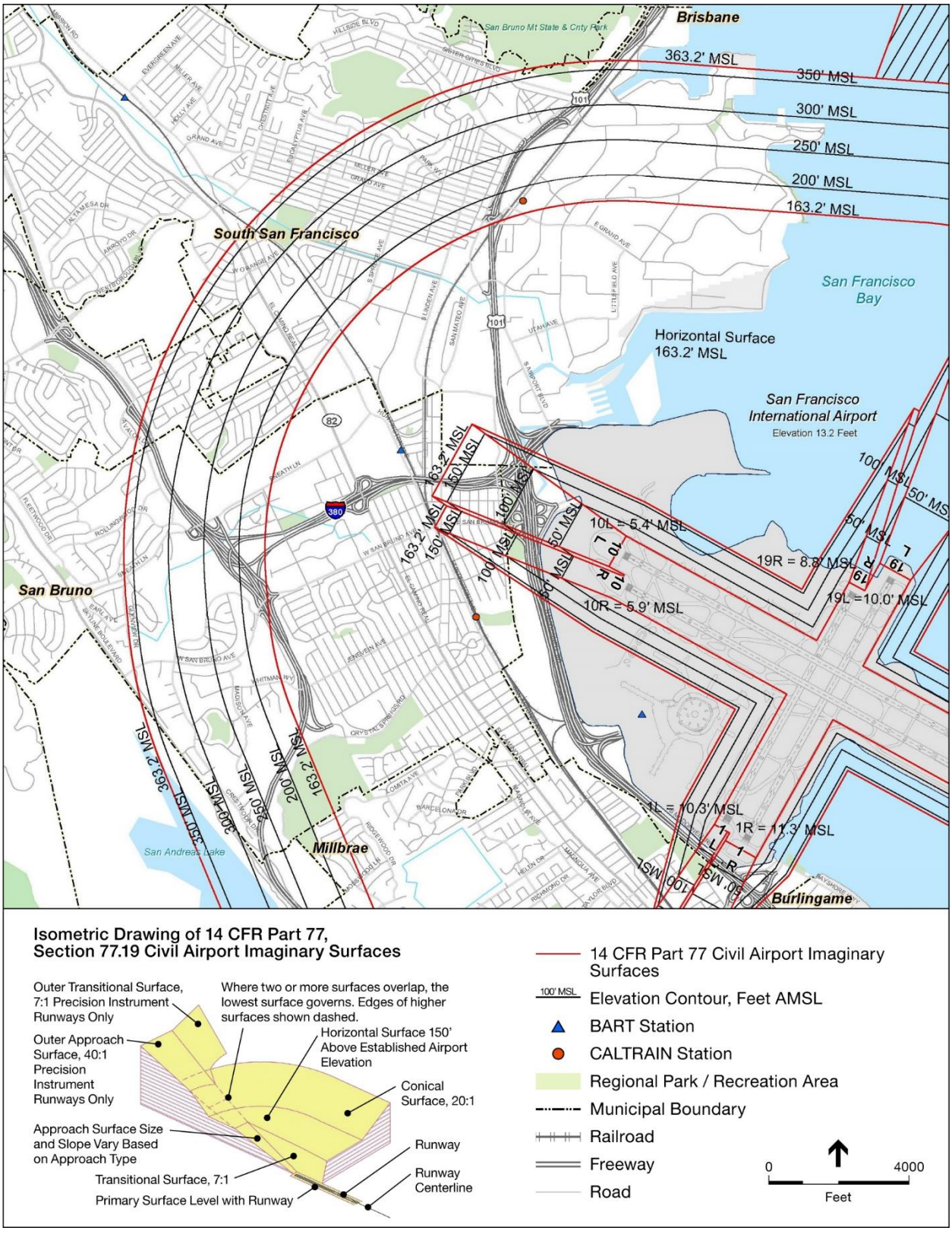
- Terrain Penetrations of Airspace Surface
- Less than 30
- 30-65
- 65-100
- 100-150
- 150-200
- 200 and more

§77.9(c): Roadways, railroads, and waterways are evaluated based on heights above surface providing for vehicles: by specified amounts or by the height of the highest mobile object normally traversing the transportation corridor; §77.9(d): Any construction or alteration on any public use or military airport (or heliport).

Structure proponents or their representatives may file via traditional paper forms via US mail or online at the FAA's OE/MA website, http://oeaaa.faa.gov

- BART Station
- CALTRAIN Station
- Municipal Boundary
- Railroad
- Freeway
- Road

Figure 4.13-7: Airport Imaginary Surface Areas



Significance Conclusion for Impact HAZ-4

Because the Specific Plan area is not within SFO's 65 dB CNEL, an Airport Safety Compatibility Zone, FAA Notification Area, or Airport Imaginary Surface area, the SFO Airport Land Use Compatibility Plan does not identify any land use restrictions due to the location of the Baylands in relation to SFO. Thus, development of the Specific Plan is consistent with the adopted Comprehensive Airport Land Use Compatibility Plan for the Environs of San Francisco International Airport and would not result in a safety hazard or excessive noise for people residing or working in the Specific Plan area due to aircraft operations.

Impacts of Baylands development in relation to SFO airport operations would be less than significant.

e. Impact HAZ-5: Emergency Preparedness

Methodology for Determining Significance

Threshold HAZ-5 addresses the four phases of emergency response outlined in the City of Brisbane's November 2018 *Emergency Operations Plan* and provide clear performance standards and an analytical framework for determining whether Baylands development would impair implementation or physically interfere with of the City's adopted emergency response plan. Impairing any of the identified phases of emergency response would therefore be indicative of a significant impact.

Impact Assessment

Emergency Preparedness

Emergency preparedness includes actions taken in advance of an emergency to plan for and establish resources to respond to and recover from an emergency. This includes a formal emergency operations plan for responding to and recovering from emergencies and maintaining adequate emergency response personnel, supplies, equipment, and infrastructure to respond to and recover from an emergency. It also includes the establishment and maintenance of police and fire emergency personnel and facilities along with standards and requirements for development of residential and non-residential uses and infrastructure.

Development of the 2,200 dwelling units, along with up to 6.5 million square feet of commercial office development and an additional 500,000 square feet of hotel use permitted by the Specific Plan would increase Brisbane's 2022 population of 4,661 by approximately 4,905 residents and increase the City's estimated 2022 employment base of 13,000 by up to 19,480 jobs. To accommodate this doubling of the City's population and employment base would require a major update to the City's Emergency Operations Plan to address both the substantial new

demand that Baylands development would place on emergency services along with the new police and fire facilities and capabilities that would be provided by Specific Plan development. While the Specific Plan would necessitate updating the City's Emergency Operations Plan, it would not interfere with the City's ability to prepare and maintain an updated Emergency Operations Plan or perform other emergency preparedness activities.

Emergency Access

NUMBER OF ACCESS POINTS

As shown in **Figure 3-8** through **Figure 3-11**, each block designated for development of residential, commercial, and amenities within the Specific Plan area would have at least two points of access that would allow residents and/or workers on that block to evacuate without impeding access by emergency vehicles arriving on-site, including frontage on two or more roadways. As shown in **Figure 3-12**, Sustainable Infrastructure Block E4 has roadway access only along Tunnel Avenue. The elongated shape of Block E4 provides the ability to provide multiple points of access from Tunnel Avenue to each infrastructure use within the Block. The Specific Plan provides two points of access such that development would allow workers on that block to evacuate without impeding access by emergency vehicles arriving on-site.

EMERGENCY ACCESS DURING FLOOD EVENTS

The Specific Plan provides for adequate emergency access that would allow residents and/or workers to evacuate without impeding access by arriving emergency vehicles. As shown in **Figure 3-5**, except for the Amenity area that would front on two streets, each block within the Specific Plan area would front on at least three and in many cases four streets.

The Baylands primary roadway system would remain open for emergency access and evacuation in the event of flooding based on the following standards set forth in Specific Plan:

- On-site storm drainage collection facilities would be sized to convey the peak flow rate from a 25-year storm event entirely within the piping system such that Baylands roadways and recreational facilities are not flooded.
- Drainage improvements would accommodate the 100-year peak storm event within the piping system and within streets such that building finished floor elevations provide a minimum of 1 foot of freeboard above the 100-year storm event hydraulic grade line water elevation with tidal flow and 100 years of estimated sea level rise.
- Key Baylands roadways including Sierra Point Parkway, Lagoon Road, and Tunnel Avenue would remain available as evacuation routes in the event of a 100-year storm event with tidal flow and 100 years of estimated sea level rise.

Provision of Adequate Fire Flow and Fire Hydrants

As part of Baylands development, an on-site water storage tank would be constructed to provide adequate fire flow per the requirements of the North County Fire Authority, City of Brisbane, and the California Water Company (Cal Water). In addition, Cal Water and the North County Fire Authority would review water facility engineering plans to ensure that each increment of development is provided with adequate water pressure.

Site-Specific Development On-Site Safety Measures

Standard City practice is to have site-specific development projects reviewed by the North County Fire Authority in addition to the City to ensure adequate access for fire apparatus to hydrants, including adequate room for turning movements. It would also standard City practice to have the Brisbane Police Department and North County Figure Authority review site-specific development projects within the Baylands to ensure easy identification of building addresses and adequate access for emergency responders to building entries.

The City's Public Works Department and the North County Fire Authority would additionally review site-specific development plans as well as roadway and water facilities engineering plans to ensure that the placement of fire hydrants meets applicable requirements, including proper spacing, access, and identification. California Water Company would review site-specific development and water facilities engineering plans to ensure adequate water pressure and fire flows in addition to the Public Works Department and North County Fire Authority.

Site-specific multi-family residential, commercial, retail, and hotel development would also be reviewed by the City and North County Fire Authority to ensure that each building site is provided with a safe outdoor space for people to gather in the event of an emergency requiring a building to be evacuated.

Emergency Response

Emergency response activities are actions taken during, or in the immediate aftermath, of a critical incident to reduce actual impacts. Emergency response actions could include public warnings, evacuations, resource mobilization and staging, and responses from agencies including law enforcement, fire protection, emergency medical services, utilities, and public works.

As discussed in Section 4.8, *Transportation*, Baylands construction (e.g., for utility and roadwork) would require temporary closure of traffic lanes on roadways within and adjacent to the site. This could impede emergency response and evacuation activities; however, any construction activities that would result in temporary roadway closures would be required to obtain traffic permits from the City and prepare a Traffic Control Plan, which would maintain emergency response and evacuation access through appropriate traffic control measures and detours.

Police and Fire Emergency Response during Peak Travel Hours

During the weekday p.m. peak hour, traffic along Geneva Avenue will range from 2,300 to 3,200 vehicles per hour. As discussed in Section 4.8, *Transportation*, the Specific Plan proposes a four-lane road section on the Geneva Avenue bridge over Caltrain, modifying the six-lane road section that will be constructed to either side bridge by merging bus rapid transit lanes into "mixed flow" travel lanes. This reduction in width would require emergency responders to maneuver through congested traffic on the bridge without any room to maneuver around traffic. As a result, emergency response from the new fire station to be located within the northeastern portion of the Baylands to lands west of the Caltrain right-of-way would be delayed by more than 1 minute during the weekday p.m. peak hour. Police response from the western to the eastern portion of the Baylands would be similarly delayed.

Recovery from an Emergency

Recovery from an emergency is highly dependent on the nature, type, extent, and severity of the short- and long-term damage caused by the emergency, and can include post-emergency safety/damage assessments, short-term and long-term cleanup and construction activities, and administration of recovery assistance programs. In combination with available resources, the same physical features that facilitate emergency response – access, emergency water supply availability, and others -- facilitate response and recovery.

The City, in combination with other agencies, would undertake review of specific development plans, addressing issues that would assist with recovery from an emergency. Such reviews include:

- Review by the City's Public Works Department and the North County Fire Authority would ensure that Specific Plan development provides adequate access and maneuvering room for fire apparatus to facilitate recovery efforts.
- Review by the City's Public Works Department and the North County Fire Authority would ensure the placement of fire hydrants meets applicable requirements, including proper spacing, access, and identification, that adequate water pressure will be maintained, and that the site is provided with a safe outdoor space for people to gather in the event of an emergency requiring evacuation of one or more buildings.
- Relocating the Brisbane Fire Station includes expanding training facilities and provides additional space for emergency operations management that could facilitate recovery from an emergency.

Thus, Baylands development would be designed and constructed so as to facilitate emergency response, and the Specific Plan would not impair emergency recovery.

Reduce the Potential for Emergencies

As discussed in Chapter 3, *Project Description*, and throughout this chapter, the Baylands Specific Plan and EIR mitigation measures to reduce or eliminate short- and long-term risks from natural and manmade hazards, include, but are not limited to:

- Baylands development would follow the recommendations of site-specific geotechnical recommendations and be required to comply with applicable building codes and requirements of site remediation and landfill closure plans.
- Baylands roadways, utilities, and other infrastructure would be constructed in compliance with applicable design standards. Operations would comply with applicable federal, state, regional, and local laws, requirements, and standards.
- The Bayshore Mobility Plan will reduce travel speeds and increase the safety of travel.

Significance Conclusion for Impact HAZ-5

The Specific Plan development would not interfere with implementation of an adopted emergency plan, impede evacuation routes, or restrict access for emergency response or recovery. Development review by the City of Brisbane, in combination with review by the North County Fire Authority, would ensure availability of needed evacuation routes and access for emergency response personnel, provision of adequate fire flow and on-site safety measures, implementation of measures to reduce the potential for emergencies, and expand facilities needed to respond to emergencies. Impact HAZ-5 would be less than significant.

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4.14 HYDROLOGY AND WATER QUALITY

4.14.1 INTRODUCTION

a. Overview

This section describes existing environmental conditions in relation to water quality, flooding, and groundwater management; evaluates the physical environmental changes that would result from the 2025 Specific Plan project; and identifies needed mitigation measures to address significant impacts. The discussion of flooding considers projected sea level rise (SLR) through the end of the century.

Groundwater conditions and impacts in relation to existing contamination and remediation are addressed in Draft EIR Section 4.13, *Hazards and Hazardous Materials*. Issues related to the capacity and construction of stormwater drainage facilities are addressed in Section 4.16, *Utilities, Service Systems, and Water Supply*.

b. Definitions

100-year flood, base flood refers to a flood that has a 1 percent statistical chance of occurring in any given year. The 100-year flood can, however, occur in consecutive years or multiple times within any given year.

100-year storm is a storm event that has a 1 percent statistical chance of occurring in any given year. The 100-year storm can, however, occur in consecutive years or multiple times within any given year.

Aquifer refers to a body of rock or sediment that is sufficiently porous and permeable to store, transmit, and yield significant or economic quantities of groundwater to wells and springs.

Basin plan refers to a water quality control plan developed pursuant to the federal Clean Water Act[309] Section 13240. The Basin Plan is a master policy document that contains descriptions of the legal, technical, and programmatic bases of water quality regulation in the region. The Basin Plan must include (1) a statement of beneficial water uses that the Regional Water Quality Control Water Board (RWQCB) will protect, (2) the water quality objectives needed to protect the designated beneficial water uses, and (3) the strategies and time schedules for achieving the water quality objectives. Factors to be considered by an RWQCB in establishing water quality objectives must include, but are not necessarily limited to, all of the following: (1) past, present,

[309] The Clean Water Act was originally known as the Federal Water Pollution Control Act of 1948, which was the first major U.S. law to address water pollution. Concern for controlling water pollution led to sweeping amendments in 1972. As amended in 1972, the law became commonly known as the Clean Water Act.

and probable future beneficial uses of water; (2) environmental characteristics of the hydrographic unit under consideration, including the quality of water available thereto; (3) water quality conditions that could reasonably be achieved through the coordinated control of all factors which affect water quality in the area; (4) economic considerations; (5) the need for developing housing within the region; and (6) the need to develop and use recycled water.

Best management practices (BMPs), in relation to stormwater management, are control measures taken to mitigate changes to both quantity and quality of urban runoff caused through changes to land use. BMPs are designed to reduce stormwater volume, peak flows, and/or nonpoint source pollution through evapotranspiration, infiltration, detention, and filtration or biological and chemical actions. Stormwater BMPs are often classified as "structural" (i.e., devices installed or constructed on a site) or "non-structural" (procedures, such as modified landscaping practices). The U.S. Environmental Protection Agency (USEPA), California Stormwater Association, and Caltrans publish lists of stormwater BMPs for use by local governments, builders, and property owners.

Bioretention is a type of stormwater management practice that uses shallow, landscaped depressions or vegetated areas to capture, store, and treat runoff, utilizing soil and vegetation to filter pollutants and promote infiltration with the remaining design flow or volume of runoff released back into the storm drain system. A bioretention area may be lined or unlined.

C.3 refers to the provision of the Municipal Regional Stormwater NPDES Permit (MRP) that requires each Permittee to control the flow of stormwater and stormwater pollutants from land development projects (i.e., C.3 Regulated Projects or Regulated Projects). Provision C.3 also requires municipalities to implement Green Infrastructure (GI) Plans and various other GI-related actions/projects.

C.3 Regulated Projects refers to development projects subject to stormwater control requirements as defined by Provision C.3.b.ii of the MRP. This includes public and private projects that create and/or replace quantities of impervious surface above specific thresholds defined in the MRP.

Detention means the temporary storage of stormwater runoff in ponds, vaults, within berms, or in depressed areas to allow treatment by sedimentation and metered discharge of runoff at reduced peak flow rates. See also "Infiltration" and "Retention."

Discharge refers to a release or flow of stormwater or other substance from a conveyance system or storage container.

Emergent groundwater refers to the process of groundwater rising upward so that it emerges on the land surface and floods low-lying areas.

Green Infrastructure refers to stormwater infrastructure that uses vegetation, soils, and natural processes to manage water for healthier urban environments. At the scale of a development the

size of the Baylands, Green Infrastructure refers to stormwater management systems that mimic nature by soaking up, storing, and/or improving the quality of water.

GreenSuite Guidance Materials refers to the guidance materials prepared as part of the San Mateo Countywide Water Pollution Prevention Program (Countywide Program). GreenSuite guidance materials consist of the C.3 Regulated Projects Guide and the Green Infrastructure Design Guide.

FEMA refers to the Federal Emergency Management Agency.

Flood Insurance Rate Map (FIRM) refers to the official map on which the Federal Emergency Management Administration has delineated both the Areas of Special Flood Hazards and the risk premium zones applicable to the community.

Flooding refers to any condition in which the soil surface is temporarily covered with flowing water from any source, such as streams overflowing their banks, runoff from adjacent or surrounding slopes, inflow from high tides, or any combination of sources. It is distinguished from **ponding,** in which the soil surface is temporarily covered by standing water at a low point. Ponded water is typically removed by percolation, transpiration, stormwater management, or evaporation or by a combination of these processes.

Frequency (inundation) refers to the average frequency of flooding by surface water or soil saturation. It is usually expressed as the number of years (e.g., 50 years) that the soil is inundated or saturated at least once during a year.

Groundwater includes water that occurs beneath the land surface and fills the pore spaces of the alluvium, soil, or rock formation in which it is situated. It excludes soil moisture, which refers to water held by capillary action in the upper unsaturated zones of soil or rock.

Groundwater basin refers to any basin identified in the California Department of Water Resources (DWR) "California's Groundwater: Bulletin No. 118" (September 1975, updated 2003), and any amendments to that bulletin, but does not include a basin in which the average well yield, excluding domestic wells that supply water to a single-unit dwelling, is less than 100 gallons per minute.

Groundwater table refers to the upper surface of the zone of saturation in an unconfined aquifer.

Impervious Surface means a constructed surface covering or pavement that prevents the land's natural ability to absorb and infiltrate rainfall/stormwater. Typical impervious surfaces include, but are not limited to, roof tops; walkways; patios; driveways; parking lots; storage areas; impervious concrete and asphalt; gravel areas not built as pervious pavement systems; and any other continuous watertight pavement or covering. Landscaped soil and pervious pavement systems, including pavers with pervious openings and seams, underlain with pervious soil or

pervious storage material, such as an aggregate layer sufficient to hold at least the Provision C.3.d volume of rainfall runoff, are not impervious surfaces as long as infiltration into native soil can occur. Open, uncovered retention/detention facilities are not considered impervious surfaces for purposes of determining whether a project is a Regulated Project under Provisions C.3.b and C.3.g. Open, uncovered retention/detention facilities are considered impervious surfaces for purposes of runoff modeling and meeting the Hydromodification standard.

Infiltration means the downward entry of runoff from the surface into the soil.

Integrated pest management refers to an approach to weed and pest control that aims to avoid/reduce the use of chemicals (i.e., pesticides and herbicides). Integrated pest management uses regular monitoring to determine if and when treatments are needed and employs physical, mechanical, cultural, biological, and educational tactics to keep pest numbers low enough to prevent unacceptable damage or annoyance.

Inundation is the condition in which water from any source temporarily or permanently covers a land surface.

Low-impact development (LID) is an approach to land development that uses various land planning and design practices and technologies to simultaneously conserve and protect natural resource systems and reduce infrastructure costs. Typically, emphasis is on employing natural and constructed features that reduce the rate of stormwater runoff, filter out pollutants, facilitate stormwater storage on-site, infiltrate stormwater into the ground to replenish groundwater supplies, or improve the quality of receiving groundwater and surface water.

Municipal Stormwater Permit is the Phase I municipal stormwater NPDES permit under which discharges are permitted from municipal separate storm sewer systems throughout San Mateo County and other NPDES Phase I jurisdictions within the San Francisco Bay Region. The current Municipal Stormwater Permit (Order No. R2-2022-0018) was adopted on May 22, 2022.

National Flood Insurance Program (NFIP) refers to the federal program that authorizes the sale of federally subsidized flood insurance in communities where such flood insurance is not available privately.

National Pollutant Discharge Elimination System (NPDES) refers to the provision of the federal Clean Water Act that prohibits discharge of pollutants into waters of the United States unless a special permit is issued by USEPA, a state, or another delegated agency.

NAVD88 (North American Vertical Datum of 1988) refers to the vertical datum for orthometric heights established for vertical control surveying in the United States based upon the General Adjustment of the North American Datum of 1988, which serves as the standard for determining all vertical elevations, such as that of building floors and sea level.

Nonpoint source pollution refers to pollution that enters water from dispersed and uncontrolled sources, such as surface runoff, rather than through pipes. Nonpoint sources (e.g., landscape practices, on-site sewage disposal, and automobiles) may contribute pathogens, suspended solids, and toxicants to water bodies. While individual sources may seem insignificant, the cumulative effects of nonpoint source pollution can be significant.

Non-stormwater discharge includes any discharge that is not entirely composed of stormwater except those noted within an NPDES permit.

NPDES Permit is an authorization, license, or equivalent control document issued in California by Regional Water Quality Control Boards to implement the requirements of the National **Pollutant Discharge Elimination System (NPDES)** program for the discharge of pollutants from municipal sanitary sewers and industries as well as stormwater discharges.

Pervious Surface includes, but is not limited to, any of the following types of properly designed pavement systems: permeable interlocking concrete pavement (permeable pavers); pervious or permeable concrete unit pavers; reinforced grid paving containing either gravel or turf; modular pre-cast and poured-in-place pervious concrete; porous asphalt; turf block; grasscrete; suspended decking and boardwalks; porous rubber; and clay/concrete bricks and stones set on an aggregate base with aggregate in the joint spaces (not sand). Pervious pavement systems are designed to store and infiltrate rainfall at a rate equal to or greater than the immediately surrounding unpaved, landscaped areas, or store and infiltrate the rainfall runoff volume described in Provision C.3.d of the MRP. Pervious pavement must be able to infiltrate water into the ground (native soil) in order to be considered a pervious surface and qualify as LID.

Pollutant refers to a substance introduced into the environment that adversely affects or potentially affects the beneficial use of the receiving water.

Pollutant of concern refers to a contaminant that would contribute to impairments in downstream receiving waters.

Receiving waters refers to water bodies (including streams or rivers, existing lakes, or the ocean) that receive treated or untreated runoff from upland areas.

Rip rap means a layer of unconsolidated boulders, stone, rubble, concrete without protruding rebar, or similar materials placed on or near a shoreline to mitigate wave impacts and prevent erosion.

Retention means the capture and storage of stormwater to prevent it from leaving the site.

Sedimentation refers to the process of depositing soil particles, clays, sands, minerals, or other sediments being washed from land, roofing, and pavements into storm drains and drainage channels usually after rain, which accumulate in receiving waters.

Seiche is a surface wave created when a body of water is shaken, usually by earthquake activity.

Siltation refers to the accumulation of fine sediment particles, particularly silt, in runoff, streams, and water bodies. While both siltation and sedimentation are related to the accumulation and settling of soils, "siltation" specifically refers to the accumulation and settling of fine sediments (e.g., silt).

Stormwater refers to discharges generated by runoff from land and impervious areas, such as paved streets, parking lots, and building rooftops, due to rainfall and snow events that often contain pollutants in quantities that could adversely affect water quality. Most stormwater discharges are considered point sources and require coverage by a NPDES permit.

Stormwater Pollution Prevention Plan (SWPPP) is a plan describing the temporary BMPs used to prevent erosion and control sediment and other pollutants during construction of a project.

Stormwater Treatment Measures are engineered systems designed to remove pollutants by gravity settling of particulate pollutants, filtration, biological uptake, media adsorption or any other physical, biological, or chemical process. Sometimes called a treatment control, treatment control measure, or treatment control BMP.

Surface water refers to water present above the substrate or soil surface.

Tidally influenced refers to that portion of a waterway or body of water subject to inundation or changes in water level in response to the daily ebb and flow of tides.

Total maximum daily load (TMDL) is a regulatory term in the U.S. Clean Water Act, describing a plan for restoring impaired waters that identifies the maximum amount of a pollutant that a body of water can receive while still meeting water quality standards.

Tsunami refers to the ocean waves caused by a sudden displacement of the ocean floor, most often due to earthquakes. Tsunamis are sometimes referred to as "tidal waves" due to their common appearance as that of an extraordinarily high, rapidly rising, and forceful tide. The use of this term to describe tsunamis is discouraged by the scientific community, however.

4.14.2 PHYSICAL ENVIRONMENTAL SETTING

a. Baseline

As permitted by CEQA Guidelines Section 15125 (a)(1), in addition to existing drainage and water quality conditions (as of spring 2023) comprising the baseline for analysis of hydrology and water quality impacts, this section includes projected sea level rise through the Year 2100 in the baseline for analysis of flooding. Projected sea level rise as used in the baseline for flooding analysis is based on the 2024 State of California Sea Level Rise Guidance (Sea Level Rise Guidance), developed by the Ocean Protection Council (OPC), which provides a framework for

State agencies and local governments to factor climate change and associated impacts into planning and development decisions.

b. Topography and Existing Drainage Patterns

The Specific Plan area is located on the eastern flanks of the San Francisco Peninsula, which is characterized by a northwest-trending coastal mountain range with drainages that flow either to the Pacific Ocean or toward San Francisco Bay. The Baylands has a varying topography across the site, with grades at Visitacion Creek being the lowest and Icehouse Hill being the highest.

Within the western portion of the Baylands, grades are generally flat with ground slopes projecting from the edge conditions toward a dirt drainage channel running parallel to and east of the Industrial Way buildings. Portions of the Baylands near the Roundhouse and Industrial Way areas drain toward an existing low point elevation of approximately 9 feet near the intersection of Bayshore Boulevard and Industrial Way. The highest elevations are found on top of Icehouse Hill.

Topography within the eastern portion of the Baylands is dominated by the former Brisbane Landfill. After the landfill stopped receiving waste in 1967, the site was used for soil recycling, both receiving and selling fill soil. Soil recycling operations caused the landfill's height to frequently increase and decrease over the years as soil materials were imported and exported. Because of the soil recycling operation, the site has many dirt mounds with adjacent flat areas that provided access for trucks moving dirt. Visitation Creek divides the site perpendicular to Highway 101 into two areas and collects runoff from the majority of the area east of Caltrain. The northernmost areas east of Caltrain slope gently toward Beatty Avenue, while the southernmost areas slope gently toward the Brisbane Lagoon. Elevations east of Caltrain range from approximately elevation -3 feet at the existing drainage channel bottom adjacent to the Highway 101 box culvert, to approximately 80 feet atop the highest dirt mound within the former landfill (BKF 2023).

The Baylands site is located within three drainage areas (see **Figure 3-47**):

- Bayshore: 422 acres
- Brisbane Lagoon: 52 acres
- Beatty Avenue: 46 acres

Bayshore Drainage Area

The Bayshore drainage area is relatively steep and well-defined, bounded on the west and south by the slopes of San Bruno Mountain. The Bayshore drainage area is divided into an "Upper Reach" and a "Lower Reach." Encircling the upstream portion of the Bayshore drainage area west of Bayshore Boulevard, the Upper Reach carries stormwater runoff from portions of Daly

City, Brisbane, and San Francisco. Located entirely within the City of Brisbane, the Lower Reach drainage area conveys stormwater runoff from approximately 422 acres of the Baylands east of Bayshore Boulevard along with flows from the Upper Reach of the drainage area.

Flows from both reaches are discharged to the San Francisco Bay through an existing 10-foot by 10-foot box culvert under US 101 (BKF 2023), which experiences friction losses due to buildup of sediment and refuse. With sufficient precipitation and tidal action, the San Francisco Bay outfall will be submerged; however, water will not overtop the upstream drainage channel due to excess channel capacity.

Upper Reach Drainage Facilities

Drainage facilities within the Upper Reach of the Bayshore Drainage Area are described in the Baylands Infrastructure Study (BKF 2023) and include the following.

- **Daly City Storm Drain Network:** The Daly City storm drain network encompasses the western, upstream portion of the Upper Reach, where the highest elevations are located. Much of the runoff from the steeper areas travels along surface routes through natural channels and street gutters before entering the pipe network. The Daly City storm drain network terminates in a 60-inch-diameter inverted siphon that discharges to the upper open channel on PG&E's Martin Substation on Geneva Avenue.
- **Upper Open Channel:** The Daly City storm drain system discharges from the 60-inch-diameter inverted siphon at the eastern end of Midway Village into a 1,300-foot-long open channel. The channel winds its way across the southern portion of the Martin Substation and the Levinson Property in Brisbane to Bayshore Boulevard. There it discharges to a 90-foot-long, 8-foot by 5-foot box culvert connected to a 54-inch storm drain culvert under Bayshore Boulevard. In the 1990s, the existing headwall and inoperable weir at the discharge point of the open channel was replaced by the City of Brisbane to improve system efficiency by allowing unrestricted flow to the box culvert and subsequent 54-inch storm drain line under Bayshore Boulevard.
- **Levinson Overflow Area:** This 3.8-acre parcel, also referred to as the Levinson Detention Basin, is located on the west side of Bayshore Boulevard across from the Baylands at the northwest corner of Main Street and Bayshore Boulevard. The parcel is currently undeveloped and occasionally ponds due to direct precipitation, overflow runoff from the adjacent Martin Substation, and overtopping of the contiguous upper open channel. Fed by a sideways weir in the upper open channel, an approximately 6.5-foot-deep, 2.5-acre detention basin acts to alleviate downstream and Bayshore Boulevard flooding. During a 100-year design storm event, the water level of the detention basin exceeds the height of the berm and overflows onto Bayshore Boulevard.
- **Bayshore Boulevard Drainage Facilities:** Bayshore Boulevard has a low point of approximately 9 feet NAVD88 located 450 feet north of the Bayshore box culvert.

Bayshore Boulevard is currently drained by a 4-foot by 3-foot box culvert located on the west side of the street and two 24-inch-diameter parallel storm drain lines on the east side of the street. The box culvert and two parallel storm drain lines discharge into the 54-inch storm drain under Bayshore Boulevard.

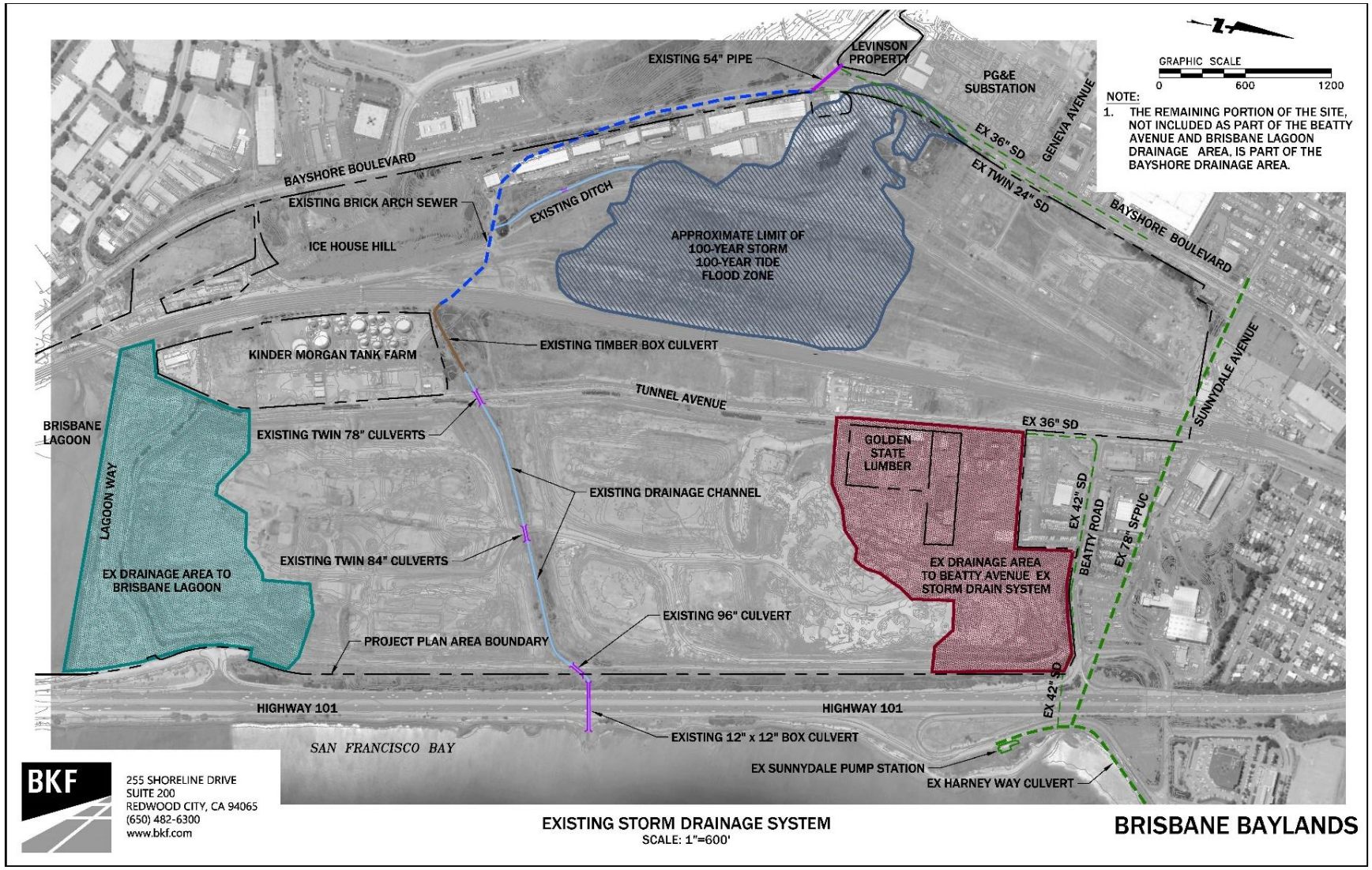
- **Brick Arch Sewer:** Stormwater from both the 8-foot by 5-foot box culvert and Bayshore Boulevard drainage facilities discharges through the 54-inch storm drain line under Bayshore Boulevard into a 3,500-foot-long, 7.5-foot-high by 8-foot-wide brick arch sewer. The brick arch sewer conveys flows from the outlet of the Bayshore Boulevard 54-inch storm drain line along Bayshore Boulevard, through the western portion of the Baylands, under the Caltrain right-of-way, and to the final discharge point on the east side of the site.

Lower Reach Drainage Facilities

Drainage facilities within the Lower Reach of the Bayshore Drainage Area are described in the Baylands Infrastructure Study (BKF 2023) and include the following.

- **Railyard Drainage Channel:** An earthen drainage channel parallels the existing Industrial Way for about 2,400 feet. The average channel bottom width is about 6 feet, and the average top width is about 18 feet. The railyard channel discharges to the brick arch sewer about 500 feet upstream of the Caltrain right-of-way.
- **Timber Box Culvert:** The brick arch sewer discharges to a 440-foot long, 5.3-foot-wide by 10-foot-high timber box culvert located in the western portion of the Baylands. The timber box culvert conveys flow from the Caltrain right-of-way to the lower open channel (see below) approximately 150 feet west of Tunnel Avenue. Due to its limited capacity and disrepair, the timber box culvert is recommended for removal.
- **Lower Drainage Channel:** The lower drainage channel is a 2,400-foot-long section of open earthen channel located within the eastern portion of the Baylands. The average channel bottom width is approximately 17 feet, with an average top width of approximately 60 feet, and the channel is segmented by three road crossings. The western crossing at Tunnel Avenue and the central crossing consist of double 78-inch-diameter culverts. The eastern crossing consists of a single 96-inch-diameter culvert.
- **US Highway 101 Box Culvert:** The lower drainage channel discharges to San Francisco Bay through a 300-foot-long, 12-foot by 12-foot box culvert under US Highway 101.

Figure 4.14-1: Existing Storm Drainage System



Beatty Avenue Drainage Area

Within the northeastern portion of the Baylands, approximately 46 acres east of the Caltrain right-of-way drain into the Beatty Avenue storm drain system. Stormwater runoff is captured by a series of inlets in the local streets and conveyed northerly through a succession of 36-inch and 42-inch-diameter reinforced concrete pipes. This system connects to a 42-inch-diameter storm drain line on Beatty Avenue between Tunnel Avenue and Alana Way before discharging to a 42-inch-diameter storm drain line that crosses under Highway 101. The 42-inch-diameter storm drain line connects to a San Francisco 78-inch-diameter combined sewer main, which ultimately discharges to the Harney Way box culvert and into the Sunnydale pump station, located east of Highway 101 on Harney Way in Brisbane.

Brisbane Lagoon Drainage Area

Approximately 57 acres of the Baylands east of the Caltrain right-of-way drain to the 121.8-acre Brisbane Lagoon. Flows from the existing surface are conveyed through a series of shallow swales adjacent to Lagoon Way, and discharge through small culverts running under Lagoon Way. Upon exiting the Lagoon Way culverts, the flow continues overland southerly to the Brisbane Lagoon.

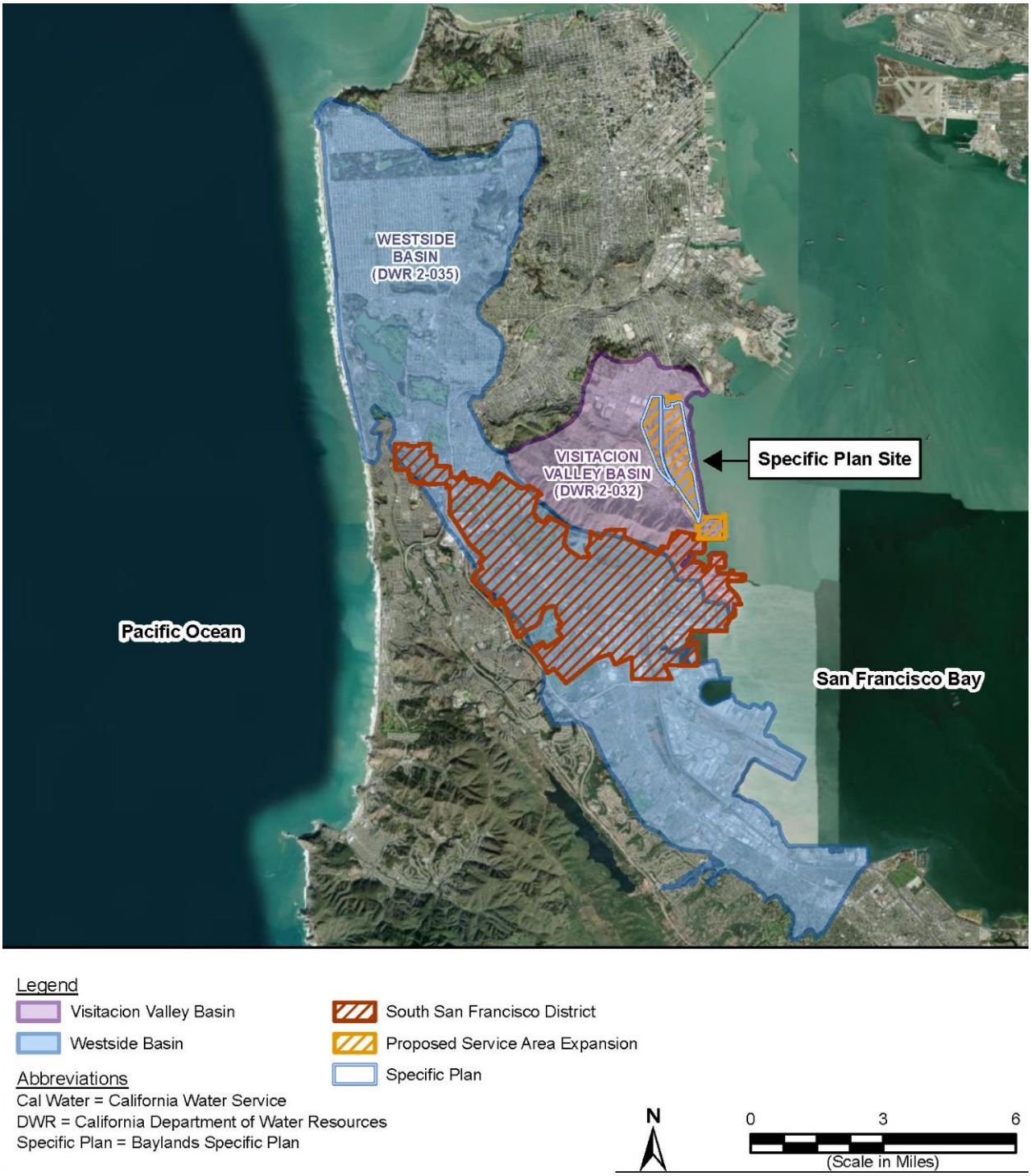
c. Existing Groundwater Conditions

The Visitacion Valley Groundwater Basin, within which the Baylands is located, encompasses a 5,830-acre area within San Francisco and northern San Mateo County (see **Figure 4.14-2**). The basin is roughly triangular in shape and is bounded by San Bruno Mountain on the southwest, the Islais Valley Groundwater Basin to the northwest, and the South San Francisco Groundwater Basin to the east. Geologically, the primary water-bearing formations consist of unconsolidated sediments, including dune sand, the Colma Formation (fine-grained sand, silty sand, and discontinuous beds of clay to 5 feet thick), bay mud and clay, and artificial fill that is largely composed of dune sand with lesser amounts of silt and clay, and some man-made debris. The unconsolidated material has a maximum thickness of 200 feet, indicating a relatively low storage capacity for groundwater and minimal protection from potential surface contamination.

A 2022 analysis of shallow groundwater conditions prepared by Geosyntec (see Appendix L.2) indicates that existing groundwater conditions vary throughout the site. Within the western portion of the Baylands, the groundwater table was observed in monitoring wells between approximately 4 to 6.5 feet NAVD88 during 2019 and 2022. Groundwater monitoring within the eastern portion of the Baylands identified groundwater elevations to be approximately 9 feet and 11 feet NAVD88 in the northern and southern portions, respectively. Groundwater near the Visitacion Creek channel and the edge of Brisbane Lagoon was found to be at approximately 3

to 4 feet NAVD88 and is generally 4 to 10.5 feet NAVD88 around the exterior of the landfill boundary. Fluctuations in the level of groundwater may occur due to variations in tidal fluctuations from the San Francisco Bay, earthwork activities, rainfall, irrigation practices, and other factors (Geosyntec 2022).

Figure 4.14-2: Visitacion Valley Groundwater Basin



As discussed in Section 4.16, *Utilities, Service Systems, and Water Supply*, Brisbane does not use groundwater from the Visitacion Groundwater Basin and purchases potable water from the San Francisco Public Utilities Commission (SFPUC). The California Water Service Company (Cal Water), which will provide water to the Baylands, Sierra Point, and Beatty areas, operates five groundwater production wells within the unadjudicated Westside Basin to supply its South San Francisco District. In its recent evaluation of California groundwater basins, DWR determined that the Basin was not in a condition of critical overdraft and designated the Basin as low priority (Cal Water 2024). From 2005 through 2024, Cal Water's South San Francisco District met up to 19 percent of its water demand from groundwater, excluding purchased in-lieu groundwater credits such as those purchased from SFPUC.

The Visitacion Valley Basin within which the Baylands, Siera Point, and Beatty areas are located is approximately 9.1 square miles and is physically bordered by a combination of surface water hydrologic boundaries, jurisdictional boundaries, and the extent of the San Francisco Bay shoreline. The Visitacion Valley Basin is categorized as a very-low priority basin according to the DWR Bulletin 118 basin priority classification (Cal Water 2024).

Like the Westside Basin, the Visitacion Valley Basin is not adjudicated, is not designated as high- or medium-priority, and is not critically over-drafted (Cal Water 2024). San Francisco overlies the northern portion of the Visitacion Valley Basin, and SFPUC applied to become the "Groundwater Sustainability Agency" for the portion of the Visitacion Valley Basin within San Francisco City/County limits. No entity has been designated as a Groundwater Sustainability Agency for the San Mateo County portion of the Visitacion Valley Basin. No groundwater sustainability plans have been developed for the Basin. As a very low-priority basin, compliance with Sustainable Groundwater Management Act within the Visitacion Valley Basin is "encouraged" but not required.

Groundwater beneath various portions of the Baylands contains pollutants at concentrations above regulatory action levels as the result of the former railyard and the former Brisbane Landfill.[310] Groundwater contamination has been the subject of longstanding remediation and final landfill closure planning efforts, culminating in State regulatory agency approvals of Feasibility Studies/Remedial Action Plans (FS/RAPs) for the western portion of the Baylands in 2022. Approved remedial action plans prohibit use of underlying groundwater without a Groundwater Management Plan pre-approved by the appropriate state regulatory agency. A similar prohibition is included in the Final Landfill Closure Plan for the former Brisbane Landfill, which has been conditionally approved by the Regional Water Quality Control Board.

[310] See Section 2.7, *Site Remediation and Title 27 Landfill Closure*, and Section 4.13, *Hazards and Hazardous Materials*, for more detail regarding groundwater contamination within the Baylands.

d. Flooding

Flood Insurance Rate Maps (FIRMs) prepared by FEMA (Community-Panel Number 06081C0035F) indicate portions of the Specific Plan area within 100-year special flood hazard zones (see **Figure 4.14-3**) (FEMA 2019). As shown, special flood hazard areas are identified north of Brisbane Lagoon and south of Lagoon Road, north of the Kinder Morgan Facility, between the railroad tracks and Tunnel Avenue, along Visitacion Creek, along US 101, and in the industrial areas along Bayshore Boulevard (FEMA 2019). A large portion of the area west of the railroad tracks is identified as being within the 500-year flood (0.2 percent Annual Chance Flood Hazard) area. The FIRMs show the remaining portions of the Specific Plan area as being outside the 100-year flood hazard area.

Existing Flooding Conditions within the Bayshore Drainage Area

Flooding conditions within the Bayshore Drainage Area are described in the Baylands Infrastructure Study (BKF 2023) and are summarized below.

Bayshore Boulevard

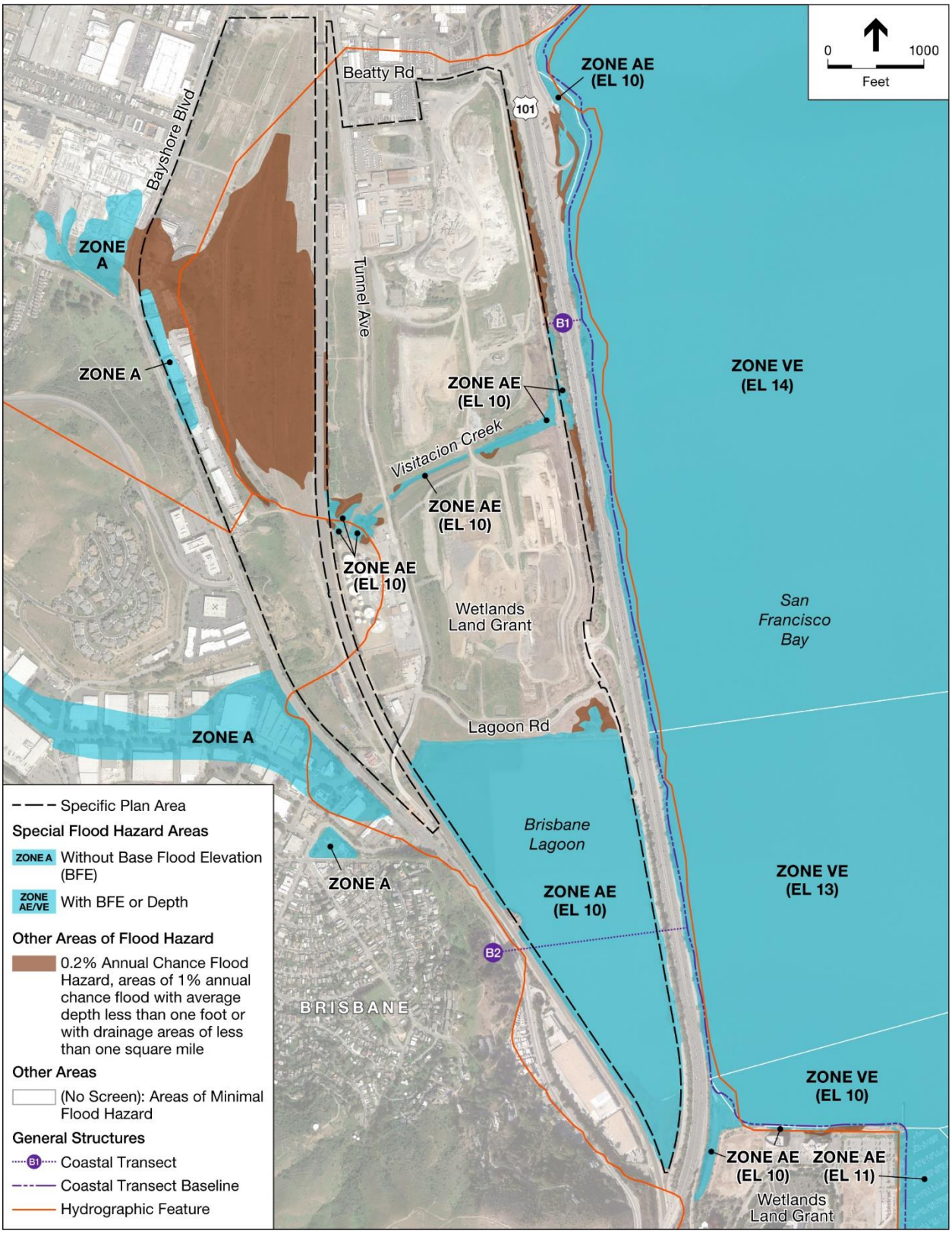
The top, or crown, elevation of the brick arch sewer is approximately 12.3 feet NAVD88 (approximately 3 feet above the low point on Bayshore Boulevard at Industrial Way). During a large storm event, stormwater from the brick arch sewer backflows into the Levinson Detention Basin.[311] When the stormwater runoff exceeds the capacity of the Levinson Detention Basin, water overtops its eastern berm and discharges to Bayshore Boulevard. In addition, runoff from the PG&E Martin Substation discharges overland to Bayshore Boulevard, increasing flood conditions during large storm events.

Former Rail Yard

As a result of stormwater runoff from Bayshore Boulevard and the railroad right-of-way, ponding occurs within the western portion of the Baylands at the outfall of the railyard drainage channel adjacent to Icehouse Hill. Overflow from the railyard drainage channel, east of and parallel to Industrial Way, further exacerbates flooding conditions during large storm events.

[311] As noted above, an approximately 6.5-foot-deep, 2.5-acre detention basin at the northwest corner of Main Street and Bayshore Boulevard acts to alleviate downstream and Bayshore Boulevard flooding. During a 100-year design storm event, the water level of the detention basin exceeds the height of the berm and overflows onto Bayshore Boulevard.

Figure 4.14-3: Special Flood Hazard Areas



SOURCE: FEMA, 2019

Timber Box Culvert

The existing timber box culvert is unable to convey the flow entering the eastern portion of the Baylands from the brick arch sewer. Due to disrepair and capacity deficiencies, ponding occurs during large storm events on a triangular portion of the site north of the timber box culvert and between the Caltrain right-of-way and Tunnel Avenue.

Existing Flooding in the Bayshore Boulevard/Industrial Way Area

The intersection of Industrial Way and Bayshore Boulevard is located at an existing low point along Bayshore Boulevard and is subject to inundation in a 100-year storm.

Existing Flooding in the Vicinity of the Kinder Morgan Tank Farm, City of Brisbane Corporation Yard, and Caltrain Right-of-Way

Existing grades within the eastern portion of the Baylands adjacent to the Kinder Morgan tank farm, Brisbane corporation yard, and the Caltrain right-of-way are subject to inundation in a 100-year flood.

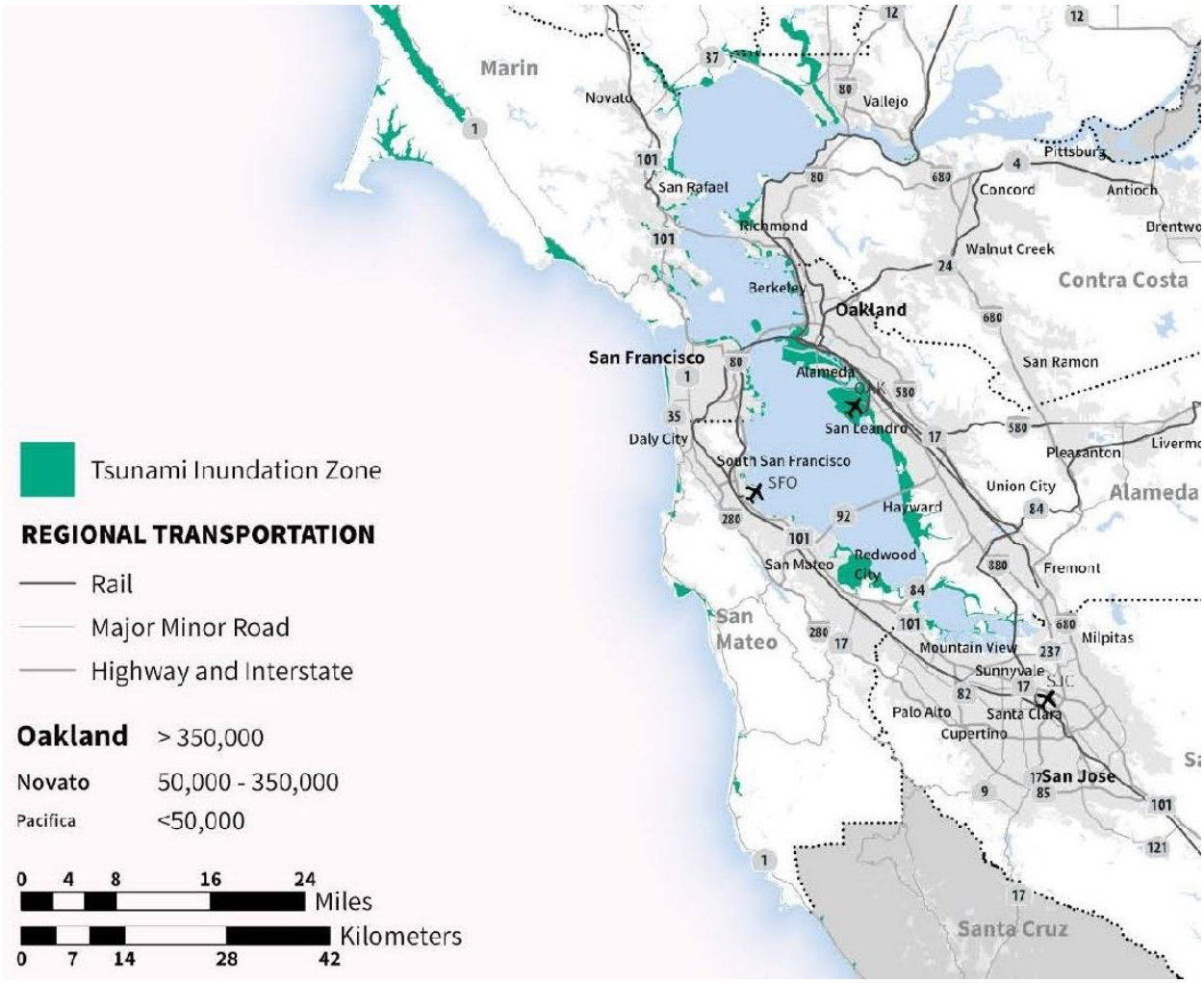
e. Tsunamis and Seiches

A tsunami is a series of waves generated in a body of water by a rapid disturbance (e.g., submarine seismic, volcanic, or landslide event) that vertically displaces water. Tsunamis affecting San Francisco Bay can result from offshore earthquakes within the Bay Area or from distant events. While it is most common for tsunamis to be generated by subduction faults, such as those in Washington and Alaska, local tsunamis can be generated from strike-slip faults (such as the small one that was triggered by the 1906 San Andreas earthquake). In general, a tsunami can move hundreds of miles per hour in the open ocean and reach land with waves as high as 100 feet or more.

According to the Plan Bay 2050 EIR, 51 tsunamis have been recorded or observed within the San Francisco Bay since 1850. Of these, the 1964 Alaska earthquake triggered by a 9.2 magnitude earthquake caused the most damage in San Francisco Bay. With a wave that was just under 4 feet in height, damage was limited to marinas and private boats in Marin County.

The geography of the bay reduces the risk of a large tsunami event (ABAG/MTC 2021). A seismic event on the Cascadia subduction zone, which runs roughly from Mendocino County to Vancouver Island and is considered a worst-case scenario for tsunami in the bay, is estimated to take several hours to reach the City and County of San Francisco, providing time to mobilize a response. ABAG has mapped portions of tsunami inundation areas within the Bay Area for emergency planning. As shown in **Figure 4.14-4**, no portions of the Baylands are within a tsunami inundation zone.

Figure 4.14-4: Tsunami Inundation Areas



SOURCE: ABAG, MTC, Plan Bay Area 2050 EIR, 2023

Seiches are oscillations of enclosed and semi-enclosed bodies of water, such as bays, lakes, or reservoirs, caused by strong ground motion from seismic events, wind stress, volcanic eruptions, large landslides, and local basin reflection of tsunamis. Seiches can create long-period waves that can cause water to overtop or damage containment features or run up on adjacent land masses. No facilities are currently present that could be subject to seiche in an earthquake.

4.14.3 REGULATORY CONTEXT FOR BAYLANDS DEVELOPMENT

a. Federal Laws, Plans, Programs, and Regulations

Clean Water Act (33 USC 1251 et seq.)

The federal Clean Water Act serves as the primary federal law protecting the quality of the nation's surface waters, including lakes, rivers, wetlands, and aquatic resources. The Clean Water Act empowers the USEPA to set national water quality standards and effluent limitations and includes programs addressing both point source and nonpoint-source pollution. Point-source pollution is pollution that originates or enters surface waters at a single, discrete location, such as an outfall structure, an excavation site, or construction site. Nonpoint-source pollution originates over a broader area and includes urban contaminants in stormwater runoff and sediment loading from upstream areas. The Act made it unlawful to discharge any pollutant from a point source into navigable waters unless a permit is obtained. The USEPA's National Pollutant Discharge Elimination System (NPDES) permit program controls discharges.

Relevant sections include:

- Section 303(d) requires each state to identify water bodies or segments of water bodies that are "impaired" (i.e., not meeting one or more of the water quality standards established by the state). Once the water body or segment is listed, the state is required to establish a TMDL for the pollutant causing the conditions of impairment. The TMDL is the quantity of a pollutant that can be safely assimilated by a water body without violating water quality standards. The TMDL can also act as a plan to reduce loading of a specific pollutant from various sources to achieve compliance with water quality objectives. Listing a water body as impaired does not necessarily suggest that the pollutants are at levels considered hazardous to humans or aquatic life or that the water body segment cannot support the beneficial uses. The intent of the 303(d) list is to identify the water body as requiring future development of a TMDL to maintain water quality and reduce the potential for continued water quality degradation.

  In accordance with Clean Water Act Section 303(d), the Regional Water Quality Control Board (RWQCB)-San Francisco Bay Region has identified impaired water bodies within its jurisdiction, the pollutant or stressor impairing water quality, and set priorities for developing a TMDL. San Francisco Bay is included on the Section 303(d) list. Pollutants or stressors identified on the Section 303(d) list for Central San Francisco Bay include pesticides such as chlordane, dichlorodiphenyltrichloroethane (DDT), and dieldrin; toxic organics such as dioxin compounds, furan compounds, polybrominated diphenyl ethers (PBDEs), and polychlorinated biphenyls (PCBs); metals such as mercury and selenium; and invasive species and trash.

TMDLs have been established for San Francisco Bay for chlordane, DDT, dieldrin, mercury, PCBs (non-dioxin-like), and the RWQCB is working on TMDLs for the Bay for dioxin compounds, exotic species, furan compounds, PCBs, and selenium, as well as a revision to the mercury TMDL. The RWQCB has also adopted a TMDL for pesticide toxicity in urban creeks such as Visitacion Creek.

- Under Section 401 as it is implemented in California, projects that propose activities that would result in the discharge of a fill material into waters of the United States are required to obtain certification from the RWQCB. Discharge of fill into non-federal waters of the state are addressed through notification in accordance with the Waste Discharge Requirements of the Porter-Cologne Water Quality Act.
- Section 402 regulates point- and non-point source discharges to surface waters through the NPDES permit program. In California, the State Water Resources Control Board (SWRCB) oversees the NPDES program, and the RWQCBs administer the permits. The NPDES program regulates point and non-point-source discharges to surface waters and provides for both general permits (those that cover a number of similar or related activities) and individual permits. Non-point sources are diffuse and originate from a wide area rather than from a definable point. Non-point pollution often enters receiving waters in the form of surface runoff but is not conveyed by way of pipelines or discrete conveyances. As defined in the federal regulations, such non-point sources are generally exempt from federal NPDES permit program requirements. However, three types of non-point source discharges are controlled by the NPDES program: discharges associated with industrial operations, non-point source discharge caused by general construction activities, and the general quality of stormwater in municipal separate stormwater systems (MS4s).

  The NPDES industrial stormwater permitting component covers ten categories of industrial activity that require authorization for stormwater discharges. California's NPDES Permit for General Construction Activity is discussed below in Section 4.14.3, *State Plans, Policies, and Regulations*. MS4 permits include requirements for construction and post-construction control of stormwater runoff.
- Section 404 establishes a program to regulate the discharge of dredged or fill material into "waters of the United States," including wetlands. Activities in waters of the United States regulated under this program include fill for development, water resource projects (such as dams and levees), infrastructure development (such as highways and airports) and mining projects. Section 404 requires a permit before dredged or fill material may be discharged into waters of the United States, unless the activity is exempt from Section 404 regulation (e.g., certain farming and forestry activities).

  The basic premise of the 404 program is that no discharge of dredged or fill material may be permitted if (1) a practicable alternative exists that is less damaging to the aquatic environment, or (2) the nation's waters would be significantly degraded. Thus,

permit applicants must show that steps have been taken to avoid impacts on wetlands, streams, and other aquatic resources; that potential impacts have been minimized; and that compensation will be provided for all remaining unavoidable impacts.

Proposed activities are regulated through a permit review process. For most discharges that will have only minimal adverse effects, a "general permit" may be suitable. General permits are issued on a nationwide, regional, or state basis for particular categories of activities. The general permit process eliminates individual review and allows certain activities such as minor road improvements to proceed with little or no delay, provided that the applicable conditions for the general permit are met. States also have a role in Section 404 decisions through state program general permits, water quality certification, or program assumption.

- An individual permit is required for potentially significant impacts. Individual permits are reviewed by the U.S. Army Corps of Engineers, which evaluates applications under a public interest review, as well as the environmental criteria set forth in the Clean Water Act Section 404(b)(1) Guidelines, regulations promulgated by USEPA.

National Flood Insurance Program

The National Flood Insurance Program, administered by FEMA under the National Flood Insurance Act, enables property owners in participating communities to purchase insurance as a protection against flood losses in exchange for state and community floodplain management regulations that reduce flood damage. Participation in the Program is based on an agreement between communities and the federal government. If a community adopts and enforces a floodplain management ordinance to reduce flood risk to new construction in floodplains, the federal government will make flood insurance available within the community as a financial protection against flood losses. This insurance is designed to provide an affordable insurance alternative to disaster assistance to reduce the escalating costs of repairing damage to buildings and their contents caused by floods. Communities are occasionally audited by the California Department of Water Resources to ensure the proper implementation of FEMA floodplain management regulations.

The City of Brisbane is a participant in the Program, and must therefore satisfy certain mandated floodplain management criteria, including adopting an ordinance that complies with regulatory standards issued by FEMA and monitoring construction and building permits and the status of the City ordinance to ensure compliance with federal laws and regulations (See Brisbane Municipal Code Chapter 15.56, Floodplain Management).

b. State Laws, Plans, Programs, and Regulations

Porter-Cologne Water Quality Control Act (California Water Code Sections 13000 et seq.)

The Porter-Cologne Water Quality Control Act (Porter-Cologne Act) established nine RWQCBs to oversee water quality on a day-to-day basis at the local and/or regional level. The nine regional boards have the primary responsibility for protection and enhancement of water quality within their respective jurisdictional boundaries. Their duties include preparing and updating water quality control plans and issuing Section 401 water quality certifications.

The State Water Resources Control Board provides state-level coordination of the water quality control program by establishing state-wide policies and plans for the implementation of state and federal laws and regulations. The RWQCBs adopt and implement water quality control plans that recognize the unique characteristics of each region with regard to natural water quality, actual and potential beneficial uses, and water quality problems. The Porter-Cologne Act grants ultimate authority to the State Water Resources Control Board over state water rights and water quality policy. The Act provides a broad definition of waters under State jurisdiction that includes any surface water or groundwater, including saline waters within the boundaries of the state. Isolated waters that may not be subject to regulations under federal law are considered to be "waters of the state" and regulated accordingly by the RWQCB. If the USACE determines wetlands or other non-wetland waters are isolated waters and not subject to regulation under the federal Clean Water Act, the RWQCB has authority to exert jurisdiction over these waters under the Porter-Cologne Act as waters of the state.

Under the Porter-Cologne Act, "water quality objectives" establish limits on levels of water quality constituents or characteristics to protect identified beneficial uses. The Act requires RWQCBs to establish water quality objectives while acknowledging that water quality may be changed to some degree without unreasonably affecting beneficial uses. Designated beneficial uses, together with the corresponding water quality objectives, also constitute water quality standards under the federal Clean Water Act. Therefore, the water quality objectives form the regulatory references for meeting State and federal requirements for water quality control.

Anti-Degradation Policy

California's anti-degradation policy, formally known as the Statement of Policy with Respect to Maintaining High Quality Waters in California (SWRCB Resolution No. 68-16), applies to the disposal of waste to high-quality surface water and groundwater.

The Policy, which protects water bodies where existing quality is higher than necessary for the protection of beneficial uses, requires any actions that can adversely affect water quality in surface and groundwaters: (1) to be consistent with maximum benefit to the people of the state, (2) not unreasonably affect present and anticipated beneficial use of the water, and (3) not result in water quality less than that prescribed in water quality plans and policies, (i.e., not result in

exceedances of water quality objectives). Any actions that could adversely affect surface waters are also subject to the federal anti-degradation policy (40 CFR Section 131.12) developed as part of the Clean Water Act.

NPDES Construction General Permit

SWRCB adopted a state-wide NPDES Permit for General Construction Activity (Construction General Permit). The San Francisco Bay RWQCB monitors and enforces the NPDES stormwater permitting for the region. Additional information on the Construction General Permit is provided below in Section 4.14.3c, *Regional Plans, Programs, and Regulations*.

California Stormwater Quality Association Best Management Practices Handbooks

The California Stormwater Quality Association is a professional member association dedicated to the advancement of stormwater quality management through collaboration, education, implementation guidance, regulatory review, and scientific assessment. It has developed and published four handbooks (Construction, Industrial & Commercial, Development, and Municipal) providing information for BMP selection throughout the life of a project—from planning and design, through construction—and into operation and maintenance. These handbooks are available for purchase from CASQA at their website: https://www.casqa.org/.

Recycled Water Use Requirements

The State Water Board adopted Water Reclamation Requirements for Recycled Water Use (Order WQ 2016-0068-DDW) on June 7, 2016 (General Order). The General Order establishes standard conditions for recycled water use and conditionally delegates authority to an Administrator to manage a Water Recycling Program and issue Water Recycling Permits to recycled water users. Only treated municipal wastewater for non-potable uses can be permitted, such as landscape irrigation, crop irrigation, dust control, industrial/commercial cooling, and decorative fountains. Potable reuse activities are not authorized under this General Order (SWRCB 2016).

RWQCB-San Francisco Amendment to Waste Discharge Requirements for Long-Term Flood Protection Considerations

The RWQCB–San Francisco Bay Region adopted Order No. R2-2022-0031, Amendment to Waste Discharge Requirements for Long-Term Flood Protection Considerations at Closed and Operating Municipal Solid Waste Bayfront Landfills in October 2022.[312] The Order requires submission of a Long-Term Flood Protection Plan for listed Bayfront Landfills, including Brisbane Landfill, within 270 days from the adoption of the Order (October 12, 2022), and is to be

[312] The full text of the Order can be found at ORDER NO. R2-2022-0031, Amending Waste Discharge Requirements for Bayfront Landfills (ca.gov).

updated every 5 years thereafter. Specifically, the order states that: The Discharger shall submit a climate change vulnerability assessment and adaptation plan acceptable to the Executive Officer. The plan shall identify strategies for the long-term protection of the landfill from flooding and inundation due to SLR, groundwater rise, and extreme climate/weather events. The plan shall:

a. Be prepared by qualified experts and consider and reference the most current official State of California climate change guidance documents.

b. Be based on providing protection from the estimated 100-year storm event, on top of the 2050 "medium-high" (0.5 percent probability of exceedance) or "extreme" risk aversion SLR scenarios as described in the most recent official state of California SLR guidance (e.g., the 2018 OPC Sea Level Rise Guidance). The 100-year storm event shall take into account astronomical tides and storm surge as well as wave run-up, seasonal effects (e.g., El Niño conditions), and discharge from local tributaries (e.g., as modeled by the USGS Coastal Storm Modeling System [CoSMoS] tool).

c. Describe how vulnerable features and infrastructure will be protected (such as landfill caps, monitoring wells, landfill gas wells, flares, levees, etc.), and how building uses, and public access will be protected prior to the projected timing of SLR, groundwater rise, and extreme storm event impacts (e.g., prior to projected flooding).

d. Propose a phased adaptation strategy that briefly describes the potential future projects that may be necessary to provide for protection from the 2100 "medium high" or "extreme" risk aversion SLR scenarios as described in the most recent official state of California SLR guidance, as well as potential accompanying changes in groundwater rise and extreme storm events. The strategy shall allow for a range of future actions at different climate change thresholds to address uncertainty and allow for flexibility over the long term.

e. Provide technical justification for the selection of both the 2050 and 2100 SLR risk aversion scenarios.

f. Identify baseline conditions for the landfill and show at a minimum the following on a map(s): sitewide elevations, vulnerable infrastructure (i.e., waste containment features, wetlands, roads, buildings, remediation systems, piping, wells), existing groundwater levels, the degree of SLR, groundwater rise, and/or extreme storm event exposure already noted at the landfill (if any), sea level elevations at which flooding will impact the landfill, areas potentially vulnerable to groundwater rise.

g. Be updated and submitted every five years with the most recently available and credible information and climate change adaptation guidance at the time of the update, including observed changes in sea levels, groundwater levels, and flooding measured at or as near as possible to the landfill (e.g., from local tide gauges and monitoring wells), and any observed or potential changes in the adaptive capacity and risk tolerance of vulnerable

infrastructure, including an implementation schedule with key milestones that have been or will be met in the future.

h. When preparing and implementing adaptive management plans, the Discharger shall take into consideration how rising shallow groundwater and any associated flooding may affect long-term cap stability, increase in leachate amounts, leachate and landfill gas migration, and post-closure monitoring and maintenance goals at the site. Groundwater monitoring data from the site should be used for the most accurate water level on-site; however, if groundwater wells are not present at the landfill, databases such as GeoTracker can be used to access water table elevations nearby, using USGS, California DWR, or other nearby cleanup site well observations. Additionally, shallow groundwater response to SLR across four Bay Area counties is currently under development." (RWQCB-SF 2022b).

State of California Sea Level Rise Guidance

At the time the Specific Plan was being developed, the 2018 State of California Sea Level Rise Guidance[313] (Sea Level Rise Guidance), developed by the Ocean Protection Council (OPC), provided a framework for State agencies and local governments to factor sea level rise impacts into planning decisions. The Sea Level Rise Guidance summarizes the best available science on SLR and encourages agencies to select a SLR projection for planning purposes based on multiple factors, such as the location of a facility, its expected lifespan, SLR exposure and associated impacts, adaptive capacity, and risk tolerance/aversion, as defined in this 2018 document. California updated its SLR planning guidance[314] in 2024 (OPC 2024). Therefore, as discussed below, the SLR analysis of the Plan for the EIR was conducted according to the 2024 updated guidance. The Sea Level Rise Guidance is expected to be revised every five years.

Because future GHG emissions depend on future actions that are not yet known, and because the climate response to these emissions are not precisely known, the sea level rise scenario that will occur cannot be precisely known at this time. To accommodate this uncertainty, the OPC (OPC 2018; OPC, 2024) recommends considering a range of scenarios for climate change adaptation planning. OPC (2018) recommends using the low risk aversion scenario for open space, such as along Visitacion Creek and Brisbane Lagoon. They also recommend using the medium-high risk aversion scenario for occupied residential and commercial buildings, such as are proposed for much of the Plan area. For OPC (2024), the derivation and terminology of the SLR scenarios was modified to be consistent with those in the nationwide update (Sweet et al.,

[313] Ocean Protection Council. 2018. State of California Sea-Level Guidance.

[314] Ocean Protection Council. 2024. State of California Sea-Level Guidance: 2024 Science & Policy Update.

2022[315]). The 2024 scenario recommended for open space, corresponding to low risk aversion, is the Intermediate Scenario. The 2024 scenario recommended for residential and commercial buildings with lifespans to 2075 and beyond is the Intermediate-High Scenario. The 2024 scenario recommended for critical infrastructure (such as roads and landfills) and for lifespans beyond 2100 is the High Scenario. **Table 4.14-1** compares the sea level rise projections from OPC (2018) and OPC (2024) for Year 2050 and Year 2100. All of these projections are relative to sea level in Year 2000. For this report, the bracketing OPC (2024) Intermediate Scenario of 3.1 feet and the High Scenario of 6.5 feet are used to assess the Plan.

Table 4.14-1: Sea Level Rise Projections, in Feet

	OPC 2018 Guidance		OPC 2024 Guidance Scenarios		
	Low Risk Aversion	**Medium-High Risk Aversion**	**Intermediate**	**Intermediate-High**	**High**
	Likely Range 66% probability sea level rise is …	*1-in-200 Chance 0.5% probability sea level rise meets or exceeds …*	*5% exceedance probability for 3°C warming*	*0.1% exceedance probability for 3°C warming*	*<0.1% exceedance probability for 3°C warming*
	To Be Applied to:		*To Be Applied to:*		
	Open space	*Residential & commercial buildings*	*Open space*	*Residential & commercial buildings, lifespan beyond 2075*	*Critical infrastructure, lifespan beyond 2100*
2050	1.1	1.9	0.8	1.0	1.3
2100	3.4	6.9	3.1	4.8	6.5

SOURCE: OPC 2018 (high emissions scenario), OPC 2024 (for San Francisco)

SB 272

SB 272 (Laird), adopted in October 2023, requires local governments within the State's coastal zone to prepare adaptation plans to address sea level rise to protect their residents, communities, infrastructure, and habitat from rising sea levels. SB 272 also authorizes the Bay Conservation and Development Commission (BCDC) to review and approve or deny these plans along the shore of San Francisco Bay, based upon Guidelines that BCDC develops. On December 5, 2024, BCDC adopted *Regional Shoreline Adaption Plan: One Bay Vision, Strategic Regional Priorities, and Subregional Adaptation Plan Guidelines* to provide the guidelines required by SB 272.

[315] Sweet, W.V., B.D. Hamlington, R.E. Kopp, C.P. Weaver, P.L. Barnard, D. Bekaert, W. Brooks, M. Craghan, G. Dusek, T. Frederikse, G. Garner, A.S. Genz, J.P. Krasting, E. Larour, D. Marcy, J.J. Marra, J. Obeysekera, M. Osler, M. Pendleton, D. Roman, L. Schmied, W. Veatch, K.D. White, and C. Zuzak. 2022. Global and Regional Sea Level Rise Scenarios for the United States: Updated Mean Projections and Extreme Water Level Probabilities Along U.S. Coastlines. NOAA Technical Report NOS 01. National Oceanic and Atmospheric Administration, National Ocean Service, Silver Spring, MD, 111 pp. https://oceanservice.noaa.gov/hazards/sealevelrise/noaa-nos-techrpt01-global-regional-SLR-scenarios-US.pdf.

Sustainable Groundwater Management Act

The passage of the Sustainable Groundwater Management Act set forth a statewide framework to help protect groundwater resources over the long-term. The Department of Water Resources provides regulatory oversight and has classified California's 515 groundwater basins into one of four categories high-, medium-, low-, or very low-priority. Each basin's priority determines which provisions of the Act apply.

The latest basin prioritization project, Sustainable Groundwater Management Act 2019 Basin Prioritization, was completed in December 2019. Ninety-four basins and/or sub-basins were identified as medium- or high-priority and will be required to form Groundwater Sustainability Agencies and develop Groundwater Sustainability Plans. These 94 basins, in combination with adjudicated areas which have existing governance and oversight in place, account for 98 percent of the pumping (20 million acre-feet), 83 percent of the population (25 million Californians), and 88 percent of all irrigated acres (6.7 million acres) within the state's groundwater basins.

There are no groundwater sustainability plans applicable to the Specific Plan Area. The groundwater basin underlying Brisbane is Groundwater Basin 2-032, the Visitacion Valley groundwater basin is considered a very low-priority basin (DWR 2024).

c. Regional Plans, Programs, and Regulations

Regional Water Quality Control Board – San Francisco Bay Region

The Baylands lies within the jurisdiction of the San Francisco Bay RWQCB, which has adopted the Water Quality Control Plan for the San Francisco Bay Region (Basin Plan) to implement plans, policies, and provisions for water quality management. Beneficial uses of surface waters within the San Francisco Bay Region are described in the Basin Plan and are designated for major surface waters and their tributaries. Beneficial uses of Central San Francisco Bay include ocean, commercial, and sport fishing; estuarine habitat; industrial service supply; fish migration; fish spawning; navigation; rare and endangered species preservation; recreation; shellfish harvesting; and wildlife habitat. The California Water Resources Control Board identifies estuarine habitat, wildlife habitat, water contact recreation, and non-contact recreation as existing beneficial uses of the lagoon.[316]

Construction Activity Permitting – National Pollutant Discharge Elimination System

CONSTRUCTION GENERAL PERMIT

As discussed above, the NPDES permit program was established by the Clean Water Act to regulate municipal and industrial discharge to surface waters of the United States from their

[316] https://www.waterboards.ca.gov/rwqcb2/water_issues/programs/planningtmdls/basinplan/web/tab/tab_2-01.pdf.

municipal stormwater systems. The SWRCB adopted a state-wide NPDES Permit for General Construction Activity (Construction General Permit) on September 2, 2009 (Order No. 2009-0009-DWQ, as amended by 2010-0014-DWQ and 2012-0006-DWQ). The SWRCB adopted a General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities in September 2022 (Order WQ 2022-0057-DWQ). The order became effective on September 1, 2023.

The San Francisco Bay RWQCB monitors and enforces the NPDES stormwater permitting for the region.

The Construction General Permit regulates construction site stormwater management. Dischargers whose projects disturb 1 or more acres of soil, or whose projects disturb less than 1 acre but are part of a larger common plan of development that in total disturbs 1 or more acres, are required to obtain coverage under the general permit for discharges of stormwater associated with construction activity. Construction activity subject to this permit includes clearing, grading, grubbing, excavation, or any other activity that results in a land disturbance of equal to or greater than 1 acre. The permit does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility.

The Construction General Permit requires that developers of land where construction activities will occur over more than 1 acre do the following (SWRCB 2022):

- Complete a risk assessment to determine pollution prevention requirements pursuant to the three risk levels established in the General Permit;
- Eliminate or reduce non-stormwater discharges to storm sewer systems and other waters of the nation;
- Develop and implement a stormwater pollution prevention plan (SWPPP) that identifies the sources of sediment and other sources that affect the quality of stormwater discharges and specifies BMPs that will reduce pollution in stormwater discharges to the Best Available Technology Economically Achievable/Best Conventional Pollutant Control Technology standards; and
- Perform inspections and maintenance of all BMPs.

To obtain coverage under this permit, project operators must electronically file permit registration documents with SWRCB before the start of construction. Permit registration documents must include the following.

- Notice of Intent;
- SWPPP, including:
    - Risk assessment for construction sites;

    - Active stormwater effluent monitoring and reporting program during construction;
    - Rain event action plans;
    - Numeric action levels for pH and turbidity;
    - Requirements for qualified professionals to prepare and implement the plan;
    - Specifications for BMPs to be implemented during and after project construction; and
    - Plan for inspection and maintenance of project BMPs and facilities at end of construction.
- Site Drawings and Maps;
- Applicable plans, calculations, and other supporting documentation for compliance with existing permitted Phase I or Phase II municipal separate storm sewer system post-construction requirements or the post-construction standards of the General Permit;
- Permit fee; and
- Signed certification statement.

The Construction General Permit requires the SWPPP to identify BMPs that will be implemented to reduce potential chemical contaminants that would affect water quality. There are two categories of BMPs: structural and non-structural. Structural BMPs involve the specific construction, modification, operation, maintenance, or monitoring of facilities to minimize the introduction of pollutants from the drainage system. Non-structural BMPs are activities, programs, and other non-physical measures that would contribute to the reduction of pollutants from nonpoint source pollutants to the drainage system. BMPs include treatment requirements, operation procedures, and practices to control site runoff, spillage, leaks, waste disposal, and drainage from raw materials storage.

Types of BMPs include erosion control (e.g., preservation of vegetation), sediment control (e.g., fiber rolls), non-stormwater management (e.g., water conservation), and waste management. The SWPPP also includes descriptions of BMPs to reduce pollutants in stormwater discharges after all construction phases have been completed at the site (post-construction BMPs).

BMP implementation must consider changing weather conditions and construction activities, and various combinations of BMPs may be used over the life of a project to maintain compliance with the Clean Water Act. The NPDES General Permit gives the owner the discretion to determine the most economical, effective, and innovative BMPs to achieve the performance-based goals of the NPDES General Permit.

MUNICIPAL REGIONAL STORMWATER PERMIT

Municipalities in San Mateo County, including the City of Brisbane, are listed as co-permittees in a Municipal Regional Stormwater NPDES Permit (MRP) Order No. R2-2022-018, NPDES Permit No. CAS612008 adopted by the San Francisco Bay RWQCB in May 2022 (RWQCB-SF 2022). The Municipal Regional Permit outlines the State's requirements for municipal agencies in San Mateo County to address the water quality and flow-related impacts of stormwater runoff (RWQCB-SF 2022a). The MRP is a comprehensive permit that regulates activities related to construction sites, industrial sites, illegal discharges and illicit connections, new development, and municipal operations. The permit also requires a public education program, implementing targeted pollutant reduction strategies, and a monitoring program to help characterize local water quality conditions and begin evaluating the overall effectiveness of the permit's implementation (C/CAG 2024).

The Municipal Regional Permit includes requirements for incorporating appropriate source control, site design, and stormwater treatment measures through LID measures into new development and redevelopment projects. These requirements are known as Provision C.3 requirements. In particular, development and redevelopment projects are required to capture, control, treat, and/or promote the infiltration of stormwater such that the rate and volume of stormwater exiting the property to the municipal stormwater system is equal to or less than existing conditions.

Subsequent to Specific Plan approval, Baylands development will require preparation of a Stormwater Management Plan that identifies specific measures to meet Provision C.3 of the NPDES permit (RWQCB-SF 2022a).

San Mateo Countywide Water Pollution Prevention Program

The San Mateo Countywide Water Pollution Prevention Program (SMCWPPP) was established in 1990 to reduce the pollution carried by stormwater into local creeks, San Francisco Bay, and the Pacific Ocean. The program is a partnership of the City/County Association of Governments (C/CAG), each incorporated city and town in the county, and the County of San Mateo, which share a common regional urban stormwater NPDES permit. Some of the requirements of the MRP are implemented directly by municipalities while others are addressed by the San Mateo Countywide Water Pollution Prevention Program on behalf of all the municipalities.

Due to the complex and varied nature of the MRP and efforts related to stormwater management in San Mateo County, the Countywide Water Pollution Prevention Program maintains its own program website, which can be found at www.flowstobay.org, and provides

project guides to aide project applicants with including post-construction stormwater controls in development project designs. These guides include:

- C.3 Regulated Project Guide (Guidebook) describes stormwater treatment options, techniques, design, and maintenance requirements. These treatment options vary from "local" improvements at individual building sites to "area wide" concepts such as stormwater treatment ponds and bio-retention areas with large open space areas (SMCWPPP 2020b). The Guide is intended to provide technical information primarily for parcel-based projects that are required to implement stormwater control measures to comply with the MRP.
- The Green Infrastructure Design Guide (GI Design Guide) is a comprehensive design guide to help agencies, developers, design professionals and construction firms design, build and integrate green infrastructure facilities into street, site, and parking lot projects that may or may not be required to implement stormwater control measures in San Mateo County (SMCWPPP 2020a). This Design Guide integrates complete street and green street goals (sustainable streets) and is intended to assist local jurisdictions in the gradual transition of stormwater infrastructure from "gray" to "green" over time.

Both the C.3 Regulated Project Guide and the Green Infrastructure Design Guide contain design guidance and typical details for green infrastructure and low impact development (LID) implementation in public and private projects.

San Mateo County Flood and Sea Level Rise Resiliency District (One Shoreline)

The San Mateo County Flood and Sea Level Rise Resiliency District, also known as "OneShoreline," was established by State legislation in January 2020 as the first countywide government agency in California to build regional resilience to the water-related impacts of climate change. The countywide District focuses on planning and constructing solutions to the climate change impacts of SLR, flooding, and coastal erosion. OneShoreline is governed by a seven-member Board consisting of two members of the San Mateo County Board of Supervisors, and five members from city and town councils within the county.

In June 2023, OneShoreline adopted Planning Policy Guidance to function as a "standardized yet evolving resource for cities and the County to account for climate-driven flooding, stormwater, shallow groundwater rise, and sea level rise in planning documents (general plan, specific plan, zoning ordinance) and approvals of projects in areas near the Bay subject to foreseeable climate impacts."

The document contains recommendations for new development rather than guidance for existing development, consistent with OneShoreline's current focus on ensuring private development is appropriately sited and designed with respect to projected sea level rise. Also, while the document includes template policies that pertain to public facilities and

infrastructure, it does not provide detailed guidance on how to implement those policies. OneShoreline anticipates issuing a complementary guidance document to address integrating climate risks into capital improvements planning.

OneShoreline's Bay Protection Standard is the Base Flood Elevation of San Francisco Bay plus 6 feet. In coastal areas impacted by waves, the Base Flood Elevation incorporates tides, storm surge, and wave runup on the existing coastal structure. Based on the current FIRMs published for San Mateo County in 2019, the Base Flood Elevation Bay water level along the shoreline ranges from 10 feet to 16 feet NAVD88. Therefore, the Bay Protection Standard ranges from 16 feet to 22 feet NAVD88.

Policies suggested for General Plans contained in the OneShoreline Planning Policy Guidance document include the following:

- **Buffer Zone.** Develop a Buffer Zone of 100 feet—at a minimum—from the San Francisco Bay Shoreline and 35 feet—at a minimum—from Top of Creek Bank to provide space to accommodate and maintain built and Natural Infrastructure for flood protection, habitat restoration, and Public Access. A wider Buffer Zone to accommodate habitat migration shall be included where feasible.
- **Future Conditions Protection for the Built Environment.** Ensure that new and/or substantial construction is planned and designed to accommodate Future Conditions for the life of the project.
- **Siting and Designing New Critical Facilities and Public Infrastructure.** Site new Critical Facilities and public infrastructure in areas that are not vulnerable to Future Conditions. If new Critical Facilities and public infrastructure cannot be located outside of areas prone to flooding, sea level rise, and shallow groundwater rise, ensure that facilities are constructed to appropriate standards to maintain operations under these Future Conditions over the life of the project.
- **Private Development Vulnerability Assessment and Mitigation.** Based on the geotechnical data collected on-site, new and/or substantial construction shall assess the project's vulnerability to shallow groundwater rise and incorporate project measures that will monitor and mitigate seasonal and permanent impacts, including buoyancy, seepage, infiltration, liquefaction, corrosion, and contaminant mobilization hazards.
- **Natural Infrastructure in Shoreline Protection.** Prioritize the use of Natural Infrastructure, including the protection, restoration, and expansion of existing coastal habitats, consistent with the Open Space and Conservation element habitat conservation policies. Shoreline infrastructure projects should evaluate the use or restoration of natural features and ecosystem processes—such as tidal marshes, eelgrass, mudflats, beaches, and oyster reefs—and incorporate these features to the greatest extent feasible to conserve ecosystem values and functions, which benefit people and wildlife

- **Shoreline Barrier Location.** Require that shoreline barriers are sited as landward as possible within the Buffer Zone to provide as much space as possible for rising Bay water levels, incorporation of natural elements, sensitive habitats, and future Bayland-upland transition zone habitat migration.
- **Future Conditions Protection for Ecological Assets.** Protect critical existing ecological assets from Future Conditions brought on by climate change by accounting for these assets in land use planning and shoreline infrastructure project development. This includes protecting sensitive habitats within Buffer Zones adjacent to planned shoreline infrastructure projects, as well as planning for and accommodate upland migration of habitats vulnerable to sea level rise.
- **Intertidal and Subtidal Habitat Conservation and Restoration.** Promote the conservation, restoration, and enhancement of intertidal and subtidal habitats, which can help reduce impacts on shoreline infrastructure.
- **Habitat Buffers.** By requiring a Buffer Zone wider than the minimum where feasible, encourage shoreline development projects and associated infrastructure to be sited such that they do not encroach upon Bayland-upland transition zone habitats and provide adequate space to accommodate upland migration of habitats vulnerable to sea level rise.
- **Native Plants.** Require that shoreline development projects and other projects including habitat restoration include native plantings consistent with BCDC Policies and Design Guidelines.
- **Removal of Hard Infrastructure.** To allow opportunities to restore ecological value to shorelines and creek banks and restore natural floodplain processes for increased flood protection, existing hard protection should be removed when the structure(s) no longer requires a hard protective structure (e.g., redeveloped or demolished).
- **Public Access in Buffer Zones.** Require that new development in higher density residential or commercial areas adjacent to the San Francisco Bay shoreline or creeks provide and maintain Public Access within the Bay and Creek Buffer Zones based on the locally adopted guidelines and BCDC Policies and Design Guidelines. Public Access along these water bodies shall be provided in perpetuity, including dedicating appropriate access easements to the local agency at no cost to the public in the same manner that streets, park sites, and school sites are dedicated to the public as part of the subdivision process in cities and counties.
- **Future Conditions for Public Access.** Require Public Access to remain viable in the event of future flooding, sea level rise, and shallow groundwater rise, or provide equivalent access consistent with the project as existing access is impacted by Future Conditions over the life of the project in accordance with BCDC Policies and Design Guidelines.

- **Gaps in the Bay Trail.** Eliminate gaps in the Bay Trail where applicable coordination with the Metropolitan Transportation Commission/Association of Bay Area Governments Bay Trail Program by requiring new shoreline development and redevelopment to construct missing Bay Trail segments.
- **Regional Shoreline Infrastructure.** Require new and/or substantial construction on properties within 100 feet of the San Francisco Bay to contribute to regional shoreline infrastructure that incorporates natural features to the greatest extent feasible.
- **Stormwater Infrastructure Capacity.** Require any new stormwater infrastructure to be designed to function under Future Conditions for the life of the project.
- **Local Floodplain Ordinances.** Update local floodplain ordinances to align with State and OneShoreline sea level rise guidance.
- **Natural Infrastructure in Shoreline Protection.** Prioritize the use of natural infrastructure, including the protection, restoration, and expansion of existing coastal habitats, consistent with habitat conservation policies. Shoreline infrastructure projects should evaluate the use or restoration of natural features and ecosystem processes—such as tidal marshes, eelgrass, mudflats, beaches, and oyster reefs—and incorporate these features to the greatest extent feasible to conserve ecosystem values and functions, which benefit people and wildlife.
- **Habitat Buffers.** By requiring a buffer zone wider than the minimum where feasible, encourage shoreline development projects and associated infrastructure to be sited such that they do not encroach upon shoreline-upland transition zone habitats and provide adequate space to accommodate upland migration of habitats vulnerable to sea level rise.

BCDC Regional Shoreline Adaptation Plan

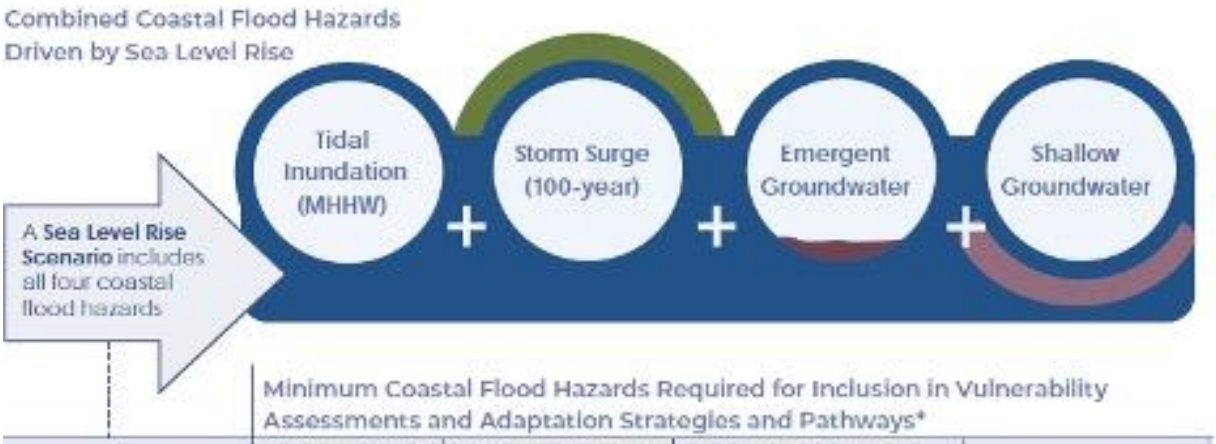
The BCDC Commission adopted *Regional Shoreline Adaption Plan: One Bay Vision, Strategic Regional Priorities, and Subregional Adaptation Plan Guidelines* as part of its San Francisco Bay Plan on December 5, 2024. A key requirement of this plan is for cities with land subject to BCDC jurisdiction to prepare Subregional Shoreline Adaptation Plans. As outlined in SB 272, all plans must be approved by January 1, 2034; however, BCDC strongly encourages local agencies to submit their subregional plans before the legislative deadline.[317]

[317] As required by SB 272, Subregional Plans are based on best available science, contain a vulnerability assessment that include efforts to ensure equity for at-risk communities, include sea level rise adaptation strategies and recommended projects, identify planning and implementation responsibilities, and include a timeline for updates, among other requirements.

The Regional Shoreline Adaption Plan contains three major components:

1. **One Bay Vision** provides big-picture goals to guide the priorities and requirements of the Regional Shoreline Adaption Plan and addresses the following issues:
    - Community Health and Well-being
    - Ecosystem Health and Resilience
    - Development, Housing and Land Use
    - Critical Infrastructure and Services
    - Public Access and Recreation
    - Transportation and Transit
    - Shoreline Contamination
    - Collaborative Governance, Flood Management, and Funding
2. **Strategic Regional Priorities** identify the key issues that impact the entire region and can only be resolved through coordinated local adaptation, including:
    - Reduced Involuntary Displacement Risk
    - Complete and Connected Ecosystems
    - Reliable Critical and Emergency Services
    - Connected Regional Shoreline Access
    - Regional Movement of People and Goods
    - Clean Communities and Environmental Justice
    - Cross-Jurisdictional Flood Risk Reduction
3. **Subregional Shoreline Adaptation Plan Guidelines** describe how cities and counties are to develop Subregional Shoreline Adaptation Plans, including:
    - **Coastal Flood Hazards and Sea Level Rise Scenarios** that identify the hazards that plans are to address -- sea level rise, tidal inundation, storm surge, groundwater emergence flooding, and shallow groundwater (see **Figure 4.14-5**).

Figure 4.14-5: Minimum Coastal Hazards Requirements for Subregional Shoreline Adaption Plan Vulnerability Assessments and Adaptation Strategies and Pathways



Minimum Coastal Flood Hazards Required for Inclusion in Vulnerability Assessments and Adaptation Strategies and Pathways*

Sea Level Rise Scenarios	Tidal Inundation (MHHW)	Storm Surge (100-year)	Groundwater Emergence/ Flooding	Shallow Groundwater (<9ft)
0.8 ft (2050)	MHHW + 0.8 ft	MHHW + 3.5 ft + 0.8 ft	Groundwater that has reached the surface for 0.8 ft of sea level rise	Depth to groundwater for 0.8 ft of sea level rise
3.1 ft (2100 Intermediate)	MHHW + 3.1 ft	MHHW + 3.5 ft + 3.1 ft	Groundwater that has reached the surface for 3.1 ft of sea level rise	Depth to groundwater for 3.1 ft of sea level rise
4.9 ft (2100 Intermediate -High)	MHHW + 4.9 ft	MHHW + 3.5 ft + 4.9 ft	Groundwater that has reached the surface for 4.9 ft of sea level rise	Depth to groundwater for 4.9 ft of sea level rise
6.6 ft (2100 High)	MHHW + 6.6 ft	MHHW + 3.5 ft + 6.6 ft	Groundwater that has reached the surface for 6.6 ft of sea level rise	Depth to groundwater for 6.6 ft of sea level rise

- The **Minimum Categories and Assets** standard identifies essential assets to be evaluated, including:
  - Plan Requirements
  - Vulnerability Assessment
  - Adaptation Strategies and Pathways
  - Land Use and Policy Plan
  - Implementation Plan and Funding Strategy, including prioritized listing of adaptation projects to be undertaken

Regional Groundwater Storage and Recovery Project

In a joint effort between SFPUC, Cal Water, the City of Daly City, and the City of San Bruno, the Regional Groundwater Storage and Recovery Project was developed to support groundwater and surface water management in the South Westside Basin[318] and improve the reliability of the SFPUC regional water system. The Storage and Recovery Project agreement, which was signed in December 2014 included an agreement by the four municipal pumpers within the South Westside Basin to self-limit pumping to no more than 6.9 mgd, of which Cal Water's designated quantity is an annual average rate of 1.37 mgd or 1,534 afy.

Under the Storage and Recovery Project, SFPUC provides supplemental regional water system water to Cal Water and the other "Partner Agencies" (i.e., Cal Water, Daly City, and San Bruno) during normal and wet years and in turn the Partner Agencies reduce their groundwater pumping in their own wells to allow the South Westside Basin to recharge. During dry years, the Partner Agencies may pump from Storage and Recovery Project wells in addition to resuming use of their own wells up to designated quantities. The in-lieu recharge (i.e., "put") and additional groundwater pumping from Storage and Recovery Project wells (i.e., "take") are tracked under the Westside Basin Storage Account. Production wells in the South Westside Basin are considered to be either a Storage and Recovery Project Well Facility or a Partner Agency Facility, where only production from Storage and Recovery Project Well facilities is tracked as part of the Storage and Recovery Project.

The Storage and Recovery Project provides additional dry-year water supply to increase regional water supply reliability. Phase 1 of the Storage and Recovery Project consisted of the construction of 13 well stations to produce approximately 6.2 MGD and associated facilities, such as pumping systems, pipelines, and chemical treatment equipment. Phase 2 consisted of the installation of test wells that will not be converted to production wells at this time but will allow for determination as to whether the identified sites could be viable future production wells and will provide information related to water quality and potential pumping capacities that can be used for future planning and decision making.

[318] **Figure 4.14-2** indicates the boundaries of the Westside Basin in relation to the Baylands Specific Plan area and the Visitacion Valley Groundwater Basin.

d. City of Brisbane Plans, Ordinances, and Regulations

General Plan

Chapter IX: Conservation Element

Policy 130: Conserve water resources in the natural environment.

Program 130a: As an ongoing part of land use planning and CEQA analysis, determine whether proposals could affect water resources.

Program 130b: Require, as appropriate, project analysis of drainage, siltation, and impacts on vegetation and on water quality.

Policy 130.1: The City requires restoration of wetland losses. The determination of which land areas are wetlands will be done by those federal and state agencies having jurisdiction. The City, however, is especially concerned with those wetlands surrounding the perimeter of the Brisbane Lagoon, the Bay shoreline, the Levinson Marsh, and the Quarry sediment ponds. The ratios of restoration may exceed the regulatory agencies' mitigation minimums.

Policy 130.4: Wetland and mitigation areas that are mitigations for project impacts must be protected by recorded deed restrictions.

Policy 130.5: It is Brisbane's desire that mitigation for Brisbane's wetland losses occur somewhere within the jurisdictional boundaries or sphere of influence of the City of Brisbane, if feasible.

Policy 131: Emphasize the conservation of water quality and of riparian and other water-related vegetation, especially that which provides habitat for native species, in planning and maintenance efforts.

Policy 132: Recognize the importance of the Brisbane Lagoon and the Levinson Marsh as wildlife habitats, valuable community resources and drainage basins, and cooperate with responsible agencies in their conservation.

Policy 133: Reduce the amount of sediment entering waterways.

Program 133a: Participate in programs to improve water quality in the Lagoon and the Bay.

Program 133b: Require all development, especially that involving grading, to exercise strict controls over sediment.

Policy 134: Reduce the amount of pollutants entering waterways.

Program 134a: Cooperate with the Water Quality Control Board and County Department of Environmental Health and participate in the NPDES Program to monitor and regulate point and non-point discharges.

Program 134c: Encourage wetlands restoration projects to remove or fix toxicants and reduce siltation.

Program 134d: Utilize wetlands restoration projects to remove or fix toxicants and reduce siltation where appropriate.

Chapter X: Community Health and Safety Element

Policy 153: Require the construction of new improvements and the upgrade of existing stormwater infrastructure to mitigate flood hazard (see *Policy 130.2*).

Program 153b: Work with Daly City and affected property owners to design improvements to alleviate flooding on the section of Bayshore Boulevard between Geneva Avenue and Main Streets.

Program 153c: In conjunction with design of infrastructure to serve the Baylands, require that the property owner address the issue of flooding around the open drainage channel that flows west to east across the property.

Policy 155: Pay special attention to the condition and maintenance of storm drain facilities to avoid flooding.

Program 155a: Schedule regular maintenance to remove silt and debris from storm drain facilities.

Program 155b: As a part of Capital Improvements Planning, replace and repair, as economically feasible, storm drain facilities as needed to prevent flooding.

Policy 221: If new development occurs, require storm drain systems to be installed to City standards.

Program 221a: In conjunction with land use development applications for vacant lands, require studies to determine design requirements to collect and remove stormwater from the property or reuse stormwater to benefit the public. Require facilities to be designed and installed to City standards, at developer's expense.

Policy 222: Require that all storm drain lines be installed within dedicated public streets.

Policy 223: Storm drains in undeveloped areas where facilities do not currently exist shall be installed at the property owner or developer's expense.

Policy 226: Undertake drainage studies to determine responsibility for siltation of the system and seek opportunities to assess the responsible parties for maintenance costs.

Program 226a: Consider environmental sensitivities in conjunction with drainage studies.

Policy 227: Cooperate with Daly City, responsible property owners, and responsible agencies to develop plans to improve the storm facilities on Bayshore Boulevard to relieve flooding.

Policy 228: Establish requirements in the Municipal Code for the installation of stormwater collection systems on private properties.

Program 228a: Require new construction and substantial renovation projects to provide roof gutters and leaders that direct stormwater through the curb to the City street so that the water can be collected in City facilities.

Program 228b: Require drainage plans to be submitted in conjunction with land use development applications, including those for building permits, as applicable to the project.

Program 228c: Provide public information on the safety aspects of dealing with stormwater and encourage homeowners and businesses to make necessary improvements and repairs.

Program 228d: Comply with National Pollutant Discharge Elimination System, as required.

Chapter XI: Policies and Programs by Subarea

Policy BL.1 J: Development shall be designed to protect uses from the 100-year flood, including 100 years of projected sea level rise as determined based on regulatory standards or guidelines in effect at the time of project construction, with the reference to guidelines and sea level rise projections approved by the Director of Public Works/City Engineer based on context-specific considerations of risk tolerance and adaptive capacity.

Policy BL.26: Support County and regional efforts to maintain and improve water quality in San Francisco Bay. Work closely with responsible agencies to assure monitoring of the landfill so as to avoid toxic leaking into the Bay and to have property owners repair any leaks.

Policy BL.27: Improve water circulation and water quality in the Lagoon by control of sedimentation and by careful monitoring and maintenance of underground pipelines by responsible agencies.

Municipal Code Chapter 15.56, Floodplain Management

Municipal Code Chapter 15.56, Floodplain Management, implements local requirements for the National Flood Insurance Program and provides the following provisions relevant to Baylands development.

A. Restricting or prohibiting uses which are dangerous to health, safety and property due to water or erosion hazards, or which result in damaging increases in erosion or flood heights or velocities;

B. Requiring that uses vulnerable to floods, including facilities which serve such uses, be protected from flood damage at the time of initial construction;

C. Controlling the alteration of natural floodplains, stream channels and natural protective barriers, which help accommodate or channel floodwaters;

D. Controlling filling, grading, dredging, and other development which may increase flood damage; and

E. Preventing or regulating the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards in other areas.

Within areas subject to special flood hazards, Chapter 15.56 sets standards for the following:

A. Anchoring to prevent flotation, collapse or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy.

B. Construction Materials and Methods to provide resistance minimize flood damage to buildings and utilities and to prevent water from entering or accumulating within electrical, heating, ventilation, plumbing and air conditioning equipment and other facilities.

C. Elevation and Floodproofing to place the lowest floor (including basements) of residential structures at or above the base flood elevation and to require that any portion of a non-residential structure, including attendant utility and sanitary facilities, below the base flood elevation is watertight with walls substantially impermeable to the passage of water and have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy as certified by a registered civil engineer or architect. In addition, all new construction and substantial improvements of structures with fully enclosed areas below the lowest floor (excluding basements) that are usable solely for vehicle parking, building access, or storage, and which are subject to flooding, shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwater.

   Chapter 15.56 also contains requirements for garages and low-cost accessory structures.

D. Standards for Utilities that require all new and replacement utilities to minimize or eliminate infiltration of floodwaters into water supply and sanitary sewage systems and discharge from systems into floodwaters.

4.14.4 RELEVANT BAYLANDS SPECIFIC PLAN PROVISIONS

The Specific Plan proposes removing existing drainage infrastructure within the eastern portion of the Baylands and installing a new drainage system following completion of landfill closure. Existing drainage infrastructure within the western portion of the site will be removed as needed during site grading and remediation, and Baylands development. The Baylands drainage and stormwater treatment system is described in greater detail in Section 3.3.2 g.

a. Drainage and Flooding

The Specific Plan requires the Baylands storm drainage system to implement solutions to address the following (see Appendix A.1 for City of Brisbane Baylands Specific Plan, Chapter 7.4, Stormwater):

- Storm drainage collection facilities shall have capacity to convey the peak flow rate from a 25-year storm event entirely within the piping system such that Baylands roadways and recreational facilities are not flooded.
- The stormwater system shall accommodate the 100-year peak storm event within the piping system and within streets such that building finished floor elevations have a minimum of 1-foot of freeboard above the 100-year storm event hydraulic grade line water elevation with tidal flow and 2100 Medium-High Risk SLR.
- Stormwater conveyance and storage capacity shall be sufficient to keep key roadways, including Sierra Point Parkway, Lagoon Road and Tunnel Avenue, available as evacuation routes in the event of a 100-year storm event with tidal flows.
- Existing drainage inlets fronting Levinson Overflow Area and the PG&E substation shall be hydraulically isolated from the existing Brick Arch Sewer system.
- Underground stormwater installations shall be designed to minimize impacts to the underlying Low Hydraulic Conductivity Layer for landfill closure.
- Storm drain materials and design shall include materials and installation techniques that address anticipated settlement due to compression/decomposition of the waste material.
- Existing Use Areas: Properties adjacent to the applicant's ownership (e.g., Kinder Morgan Tank Farm and Brisbane Public Works Yard, Bayshore Sanitary Pump Station, and Golden State Lumber) are proposed in the Specific Plan to remain at their current elevations with property access provided at the existing grades of these sites. As stated in the Specific plan, "these properties will require measures by others to adapt to future conditions.

b. Stormwater Treatment and Quality

New stormwater infrastructure for Baylands roadways, building sites, and recreational areas will be installed to provide for collection and conveyance of runoff through a network of inlets and storm drains to connect to the main open channel/underground backbone line and to Visitacion Creek (see **Figure 3-50**). The Specific Plan requires stormwater runoff to be treated prior to discharge to wetlands, Visitacion Creek, Brisbane Lagoon, and San Francisco Bay in compliance with Provision C.3 of the NPDES Municipal Regional Stormwater Permit. In addition, the Specific Plan requires stormwater treatment to include pre-treatment of development runoff before flow is directed to created wetlands. Stormwater entering the Baylands from upstream along Bayshore Avenue will not receive treatment within the site except for incidental filtration or settlement associated with flows through open channels, the in-line stormwater detention area, and Visitacion Creek.

Required stormwater treatment also includes low impact development (LID) strategies that promote landscape, habitat focused, and infiltration solutions where permitted. The final detailed selection, design, and approval of stormwater treatment measures is proposed to occur as part of the construction permitting process "to inform the development of the Stormwater Management Plan (SMP)." (See Appendix A.1 for City of Brisbane Baylands Specific Plan, Chapter 7.4 Stormwater).

4.14.5 SIGNIFICANCE CRITERIA

The following criteria were used to determine the significance of hydrology and water quality impacts.

Threshold HWQ-1: The Baylands Specific Plan would cause a significant impact if it would degrade water quality by:

- **Causing erosion or siltation at a rate greater than would occur naturally under baseline conditions at any of the following times; or**
- **Discharging chemicals of concern in stormwater to the Brisbane Lagoon or San Francisco Bay in a manner inconsistent with the Water Quality Control Plan (Basin Plan) for the San Francisco Bay Basin.**

Threshold HWQ-2: The Baylands Specific Plan would result in a significant impact if it would:

- **Permit conversion of a sufficient amount of pervious surface area to impervious surfaces so as to substantially reduce groundwater recharge and thereby contribute to subsidence; or**

- **Divert water supply to the Baylands that would otherwise be used for groundwater recharge in sufficient quantities to impede sustainable management of a groundwater basin.**

Threshold HWQ-3: The Baylands Specific Plan would cause a significant impact if it would result in injury or loss of life, or damage to a building or infrastructure, either on-site or off-site due to flooding.

Threshold HWQ-4: The Baylands Specific Plan would cause a significant impact if on-site pollutants could be released into the environment as the result of flood hazard, sea level rise and emergent groundwater, tsunami, or seiche.

4.14.6 PROJECT IMPACTS AND MITIGATION MEASURES

a. Impact HWQ-1: Water Quality Protection

Methodology for Determining Significance

Threshold HWQ-1 focuses on siltation and sedimentation, as well as chemical and other pollutants in runoff occurring in three distinct time periods:

(1) During the demolition and grading, when the potential for erosion, siltation, and sedimentation is the greatest;

(2) Following demolition and grading, during construction of site-specific development projects prior to the establishment of ground cover and infrastructure construction when open trenches or bare ground is present, when the potential for erosion, siltation, and sedimentation decreases and the potential for chemicals of concern to enter stormwater runoff increases; and

(3) Following completion of site-specific development, when impacts related to erosion decrease markedly, but those associated with urban runoff and waste discharges to enter stormwater runoff increase.[319]

Impacts related to siltation and sedimentation as well as chemical and other pollutants in runoff were evaluated by considering the general type of pollutants that Baylands development would generate during grading, construction, and subsequent operations and the likelihood of pollutants entering receiving waters such as Visitacion Creek, Brisbane Lagoon, and San Francisco Bay. In determining the level of significance, the analysis assumes that Baylands

[319] Because site remediation and final landfill closure are not part of the Specific Plan project, their potential to transport pollutants into the environment is not addressed in this EIR. Site remediation and landfill closure are required to prevent human contact with contaminated soils or the waste matrix within the former landfill. Landfill closure is also required to be designed to prevent infiltration of stormwater through the waste matrix into groundwater, the Bay, or the lagoon.

development would comply with relevant federal, state, regional, and local laws and regulations that are designed to reduce the potential for pollutants in receiving waters and thereby meet applicable water quality standards. Whether substantial soil erosion, siltation, or sedimentation would occur is defined as an increase in on- or off-site soil erosion, siltation, or sedimentation compared to that which would naturally under baseline conditions. Such an increase caused by Baylands development would be indicative of a significant impact.

In accordance with Section 303(d) of the federal Clean Water Act, the San Francisco Bay RWQCB has identified San Francisco Bay as an impaired water body and has established total maximum daily loads (TMDLs) for the pollutant causing the impairment.[320] The TMDL is the quantity of a pollutant that can be safely assimilated by a water body without violating water quality standards. Thus, an inconsistency with existing regulatory requirements designed to protect water quality would result in a significant impact because Baylands development would lead to exceedance of established total maximum daily loads for pollutants and cause impairment within the Brisbane Lagoon or San Francisco Bay.

The determination of whether Baylands development would or would not be consistent with existing regulatory requirements designed to protect water quality or discharge chemicals of concern in stormwater to the Brisbane Lagoon or San Francisco Bay exceeding San Francisco Bay Regional Water Quality Control Board (RWQCB) thresholds was based on compliance with C.3 requirements and GreenSuite guidance materials prepared as part of the San Mateo Countywide Water Pollution Prevention Program (Countywide Program), which include the *C.3 Regulated Projects Guide* and the *Green Infrastructure Design Guide*.

This analysis reasonably assumes that Specific Plan development would comply with relevant federal, state, regional, and local laws and regulations designed to minimize erosion and siltation, sedimentation, and chemical pollutants in stormwater runoff, including but not limited to:

- The California State Water Resources Control Board's General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit) Order WQ 2022-0057-DWQ NPDES No. CAS000002[321]; and
- Implementation of each specific BMP identified in the required Stormwater Pollution Prevention Plan (SWPPP).

[320] The intent of the 303(d) listing and TMDLs is to maintain water quality and reduce continued water quality degradation.

[321] California Water Resources Control Board. *National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (General Permit). Order WQ 2022-0057-DWQ, NPDES No. CAS000002*. September 8, 2022. https://www.waterboards.ca.gov/water_issues/programs/stormwater/construction/docs/2022-0057-dwq-with-attachments/cgp2022_order.pdf.

Impact Assessment

Demolition and Site Grading

From the initial demolition of existing buildings along Industrial Way and removal of pavement, vegetation, and other improvements within the Baylands and at the fire station relocation site (140 Valley Drive) until site grading is completed and ground cover (landscaping, hardscape, paving, buildings) is established, surface soils would be subject to disturbance over large portions of the Baylands and offsite construction sites, causing erosion and entrainment of silt and sediment in stormwater runoff.

While grading of the Specific Plan area would be balanced, an estimated 2.5 million cubic yards of soil would be moved from atop the former landfill in the eastern portion of the Baylands and hauled by truck to be placed as engineered fill within the area west of the Caltrain right-of-way over an approximate 2-year period. The approximately 1.8 million cubic yards of soil remaining on top of the former landfill would be temporarily moved around within the eastern portion of the site to enable construction of an impermeable landfill cap and then placed over the landfill cap as engineered fill to facilitate development and building construction within the Campus East District.

Grading activities, including excavation, backfilling, loading, and unloading soil haul trucks and placement of fill material, would expose large areas of loose soil and generate temporary stockpiles of soils, paving materials, and building materials. These stockpiles would be subject to soil loss; erosion; and transport of silts, sediments, and chemical contaminants in stormwater runoff to San Francisco Bay and the Brisbane Lagoon. In addition, accumulation of sufficient amounts of sediment would risk blockage of flows that could cause localized ponding or flooding.

Removal of vegetation prior to installation of habitat improvements within Visitacion Creek and along the north side of Brisbane Lagoon would have a higher potential for erosion than other portions of the Baylands due to tidal action and concentrated stormwater drainage over exposed soils. While proposed Specific Plan phasing indicates that soils will be disturbed and vegetation removed within Visitacion Creek relatively early to accommodate construction of the required landfill cap, it also proposes that open space and habitat restoration along Visitacion Creek and Lagoon Park would be completed as follows:

- Visitacion Creek restoration is required to be completed before the approval of any building permit (within the Campus East District) exceeding 1.25 million square feet (50 percent of the maximum allowing development east of Caltrain).
- Lagoon Park restoration must be completed before the approval of any building permit (within the Campus East District) exceeding 2.0 million square feet (75 percent of the maximum allowing development east of Caltrain).

The result of this phasing program is that temporary erosion control measures would need to be required by regulatory agencies and the City for landfill closure and grading permits, respectively. In addition, following landfill closure and placement of initial erosion control measures (which could be undertaken in multiple phases), soils would again be disturbed along Visitacion Creek and the north shore of the lagoon for habitat restoration activities, thus increasing the potential for erosion compared to undertaking landfill closure along Visitacion Creek at a single time with habitat restoration activities occurring immediately following completion of landfill closure along the creek. Based on the anticipated construction sequence indicated in **Table 3-8**, initial erosion control measures would be in place as long as 10 to 12 years.

Demolition and soil disturbance would also result in the potential for chemical releases into runoff and receiving waters. Construction equipment used on-site would operate, park, and be maintained within unpaved areas with the potential for spillage of fuels, oils, and solvents entering stormwater runoff during the approximately 2-year site grading period and from construction sites following site grading. Grading activities would also contribute to short-term siltation and pollutant loading in urban runoff from on-road vehicular travel, including hauling of soils from the eastern to the western portions of the Baylands, delivery of construction materials and removal of waste, and worker travel to and from construction sites as well as from on-site watering activities to reduce airborne dust.

Because of contaminants within existing surface soils in the western portion of the site,[322] excavations within these existing soils would have the potential to expose and risk release of those contaminants into stormwater runoff.

Baylands demolition and construction activities would generate debris in the form of building materials, as well as asphalt and concrete materials from demolition of roadways and parking areas. Demolition, grading, and construction activities would also generate contaminants associated with construction materials, construction waste, vehicles, and equipment. Due to their age, demolition of buildings along Industrial Way would expose hazardous materials such as PCBs, asbestos, and lead-based paint, risking their release into the environment.

Once released, soils and other substances exposed or generated during demolition and grading would be transported to the Brisbane Lagoon, Visitacion Creek, and San Francisco Bay in stormwater runoff, wash water, and dust control water in the absence of specific measures to contain such substances onsite. The proximity of the Baylands to Brisbane Lagoon and San Francisco Bay reduces the chance that the pollutants in stormwater runoff (e.g., sediment, construction debris, petroleum hydrocarbons, and lubricants) would be naturally attenuated prior to discharge to the Bay.

[322] See Section 4.13, *Hazards and Hazardous Materials*.

Post-Grading, Construction of Site-Specific Development Projects

Once grading is completed and construction of site-specific development projects is initiated, compacted soils within constructed building pads would be disturbed, site-by-site. An increased potential for erosion and siltation would be present at site specific and infrastructure development sites until construction of impervious surfaces is completed and landscape or habitat restoration plantings are established due to:

- All construction areas:
    - Unpaved staging areas.
    - Presence of temporary stockpiles.
- Site-specific residential and commercial development:
    - Excavations for on-site utilities, building foundations, and parking garages.
    - "Fine grading" to create on-site drainage to streets and storm drains.
    - Installation of ornamental landscaping.
- Infrastructure:
    - Excavations for underground utilities and storm drains within roadway rights-of-way.
    - Grading for roadways not completed during initial site grading.
    - Pavement removal and construction of the realigned Lagoon Road.
- Open space / Open areas:
    - Construction of park improvements within open space areas.
    - Construction of manufactured slopes to create trails and recreational amenities at Icehouse Hill.
    - Habitat restoration and trail construction activities along Visitacion Creek, including construction of the proposed detention basin.
    - Habitat restoration and construction of Lagoon Park, including placement of soils on existing rip rap to facilitate habitat restoration (see **Figure 3-20**, **Figure 3-21a**, and **Figure 3-21b**).
- Manufactured slopes, including those:
    - That would be constructed along Geneva Avenue leading to the bridge over the Caltrain right-of-way.
- Along the Caltrain right-of-way that will sit lower than the flat building pads created within the western and eastern portions of the Specific Plan for residential and commercial development, along with the flat development pads themselves.

- Slopes along the sides of the former landfill that are constructed above the required landfill cap.

Post-Construction Operations

Once construction is completed, soils within limited areas of the Baylands would continue to be exposed to forces that cause erosion, including:

- Tidal action and stormwater runoff within Visitacion Creek;
- Wave action and stormwater runoff within Lagoon Park; and
- Runoff from manufactured slopes along the Geneva Avenue extension, slopes containing the former Brisbane Landfill, and trails on Icehouse Hill.

Nonpoint source pollutants washed by rainwater from rooftops and paved areas as well as pollutants washed from landscaped areas into on-site and local drainage networks would be the primary contributors to water quality degradation following construction during the life of Baylands development.

Specific Plan development would increase vehicular use of on- and off-site roadways and parking areas, the result of which would be increased accumulation and release of petroleum hydrocarbons, lubricants, sediments, and metals (generated by the wear of automobile parts) in stormwater runoff. Runoff from landscaped areas, whether as the result of irrigation or a storm, would cause common urban pollutants to be transported to Brisbane Lagoon, Visitacion Creek, and San Francisco Bay, adversely affecting water quality, unless specific containment and treatment measures were to be implemented.

Runoff from Baylands roadways, as well as parking and loading areas, would carry urban runoff pollutants such as:

- Particulates from pavement wear and vehicles
- Metals, such as zinc, lead, iron, copper, cadmium, chromium, nickel, and manganese
- Gasoline, diesel fuel, greases, and lubricating oils from automobiles and trucks
- Tire and brake lining wear
- Polycyclic aromatic hydrocarbons (PAHs), which are created as combustion by-products of gasoline and other fossil fuels
- Trash discarded from vehicles and along the roadside

Throughout the life of Specific Plan development, nonpoint source pollutants would have the potential to be washed by rainwater from rooftops, landscaped areas, and roadways into receiving waters via on-site drainage facilities. Potential nonpoint source pollutants include products used in landscaping (e.g., pesticides, herbicides, and fertilizers); oil, grease, gasoline,

and heavy metals (nickel, copper, zinc, cadmium, and lead)[323]; trash from roads and parking areas; and petroleum hydrocarbons from fuels. Roof runoff can contribute zinc if galvanized rain gutters are installed. In addition, urban runoff can mobilize pathogens, including bacteria and viruses. Trash (such as paper, plastic, polystyrene packing foam, and aluminum materials) and biodegradable organic debris (such as leaves, grass cuttings, and food waste) have the potential to be entrained in urban runoff and adversely affect aquatic habitats.

Table 4.14-2 identifies the sources of urban pollutants that would be generated by operation of Specific Plan development.

Table 4.14-2: Sources of Specific Plan Pollutants in Urban Runoff

Pollutant	Potential Sources
Suspended-Solid/Sediments	Landscaping areas and disturbed earth surfaces.
Nutrients	Fertilizers from landscaped areas, sediment, and trash/debris.
Heavy Metals	Streets, as well as commercial and multi-family parking areas.
Pathogens (Bacteria/Virus)	Pet and food wastes, landscaped areas.
Pesticides	Landscaping and open space/areas.
Oil and Grease	Streets and parked vehicles.
Trash and Debris	Common litter and trash from developed and open space/areas.

Operations and maintenance activities would also include the use of pesticides, fuels to power equipment and vehicles, fertilizers, paints, and cleaners. In addition, urban runoff commonly contains a variety of water pollutants, including elevated levels of pathogens, sediment, trash, fertilizers, pesticides, heavy metals, and petroleum products. Stormwater can carry these pollutants through storm drain systems and ultimately to receiving waters such as Visitacion Creek, San Francisco Bay, and Brisbane Lagoon.

As noted above, the RWQCB has also adopted a TMDL for pesticide toxicity in urban creeks such as Visitacion Creek.

Together, the substantial amount of Baylands demolition, grading, and construction needed for development of 2,200 dwelling units, 6.5 million square feet of commercial office use, 500,000 square feet of hotel use, habitat and recreational improvements, and related on- and off-site infrastructure would risk release of pollutants and debris from demolition, grading, and construction activities into stormwater runoff. Following site construction, urban pollutants would be released in

[323] The primary sources of trace metals in stormwater are typically commercially available metals used in transportation (e.g., automobiles), buildings, and infrastructure. Metals are also found in fuels, adhesives, paints, and other coatings. Copper, lead, and zinc are the most prevalent metals typically found in urban runoff. Other trace metals, such as cadmium, chromium, and mercury, are typically not detected in urban runoff or are detected at very low levels. Metals are of concern because of the potential for toxic effects on aquatic life in receiving waters.

stormwater runoff from the site with the potential for releases of pollutants from the Baylands that would reach the Brisbane Lagoon or be carried by Visitacion Creek into San Francisco Bay.

Significance Conclusion for Impact HWQ-1

Soils within the Baylands would be exposed and susceptible to erosion during and after grading until groundcover is established and again during construction of site-specific projects, as well as immediately after construction before groundcover is established. In particular, grading and habitat restoration activities along Visitacion Creek and the north shore of the lagoon that are subject to tidal action would be particularly susceptible to erosion.

Grading and construction contractors for Baylands development would be required to comply with the General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Order WQ 2022-0057-DWQ NPDES No. CAS000002) (Construction General Permit).

The Construction General Permit would require each onsite and offsite Baylands construction activity to minimize or prevent pollutants in stormwater discharges and authorized non-stormwater discharges through use of controls, structures, and management practices as set forth in the General Permit that achieve best available technology (BAT) for toxic and non-conventional pollutants and best conventional technology (BCT) for conventional pollutants. The General Permit also requires that each site-specific construction development be designed to ensure that stormwater discharges and authorized non-stormwater discharges will not:

- Adversely affect human health or the environment;
- Contain pollutants in quantities that threaten to cause pollution or a public nuisance; or
- Contain pollutants that cause or contribute to an exceedance of any applicable water quality objectives or water quality standards contained in an applicable water quality control plan.

The Construction General Permit requires that site grading and site-specific development projects encompassing more than 1 acre:

- Complete a risk assessment to determine pollution prevention requirements pursuant to the three risk levels established in the General Permit;
- Eliminate or reduce non-stormwater discharges to storm sewer systems and other waters of the nation; and
- Develop and implement an SWPPP that identifies the sources of sediment and other sources that affect the quality of stormwater discharges and specifies BMPs that will reduce pollution in stormwater discharges to the Best Available Technology Economically Achievable/Best Conventional Pollutant Control Technology standards; and Perform inspections and maintenance of all BMPs.

A SWPPP includes specific construction-related BMPs to prevent soil erosion and loss of topsoil. BMPs implemented could include, but would not be limited to, physical barriers to prevent erosion and sedimentation, construction of sedimentation basins, limitations on work periods during storm events, use of swales, protection of stockpiled materials, and a variety of other measures that would substantially reduce or prevent erosion from occurring during construction.

Because (1) the BMPs to be implemented will be specific to each on- and off-site demolition, grading, and construction activity and location and (2) BMPs evolve with advancing technology, it is not possible to identify the precise BMPs that would be required by SWPPPs for each Baylands construction activity over its 20-year buildout period and subsequent operations. The process of selecting the specific BMPs for individual Baylands construction activities would typically follow the general protocol outlined below:

- **Step 1 – Identify Activities, Pollutants and Issues of Concern:** The typical first step in BMP selection is to identify:
    - Specific construction activities to be undertaken (e.g., grading, trenching, excavation, stockpiling of soil, demolition of buildings or pavement, or other activities with the potential to impact storm water and non-storm water discharges). Different types of construction activities may require different or more extensive BMPs than others. For example, Baylands site grading will occur over a much longer time frame and expose a far greater amount of soil at any given time than would construction of offsite water and electrical lines.
    - Potential pollutants of concern (e.g., sediment, known soil contaminants; petroleum products such as fuel, oil, and grease from vehicle and equipment operation; demolition debris, including debris from structures of an age where lead based paint and asbestos may be present; paving materials such as concrete and asphalt components; other materials used or stored on site, such as pesticides, herbicides, fertilizer, detergents, paint adhesives, and solvents; and project wastes such as litter, debris, hazardous wastes, and liquid wastes; and
    - Site-specific issues of concern, such as proximity to Visitacion Creek and the Brisbane Lagoon.
- **Step 2 – Evaluate Site Conditions and Select BMPs:** To assist in BMP selection, the Water Resources Control Board,[324] US EPA,[325] and Caltrans[326] have prepared manuals outlining BMPs applicable to site grading, as well as building and utility construction projects. The BMPs contained in these manuals will be used to identify the potential BMPs to be selected for each Baylands construction activity with the specific BMPs to be

[324] https://www.waterboards.ca.gov/water_issues/programs/stormwater/.

[325] https://www.epa.gov/npdes/npdes-stormwater-program.

[326] https://dot.ca.gov/programs/environmental-analysis/stormwater-management-program.

implemented for each construction activity reflecting project-specific requirements and other factors such as BMP effectiveness, cost, availability, feasibility, and suitability for the proposed construction activity and site. **Table 4.14-3** presents typical guidelines for BMP selection and implementation at a construction site.

- **Step 3 – Implement, Monitor, and Maintain the BMPs:** Selected BMPs will also need to be implemented in a sequence that maximizes protection of water quality, be monitored regularly for effectiveness and be maintained as necessary throughout the project. Most BMPs will only be implemented when needed, and/or when a storm event is forecasted or occurs.

The Construction General Permit requires compliance with specified performance standards designed to achieve and maintain applicable water quality objectives and water quality standards contained in an applicable water quality control plan.

Also, landscape management within the Baylands would be required to comply with California Department of Pesticide Regulation requirements for pesticide use (CCR Title 3, Division 6, Pesticides and Pest Control Operations). To minimize adverse effects from Baylands land use operation and maintenance activities, implementation of BMPs, such as secondary containment for storage of hazardous materials, proper disposal techniques for associated wastes, and good housekeeping measures to minimize trash and other contaminants from being collected in runoff and transported to waterways, would be required. Stormwater control/LID[327] measures would be required by the City of Brisbane as standard conditions of approval for Tentative Subdivision Map and building permits, along with compliance with RWQCB Municipal Regional Stormwater Permit Order No. 2011-0083 Provision C.3 (Provision C.3). As required by the permit, the site-specific development project applicants would incorporate LID strategies, such as stormwater reuse, on-site infiltration, and evapotranspiration as initial stormwater management strategies. Secondary methods would include the use of natural, landscape-based stormwater treatment measures, as identified by Provision C.3.

Stormwater treatment measures would also be required in the final design plans. in accordance with the San Mateo Countywide Water Pollution Prevention Program C.3 Regulated Projects Guide.[328]

[327] The goal of LID is to reduce runoff and mimic a site's predevelopment hydrology by minimizing disturbed areas and impervious cover and then infiltrating, storing, detaining, evapotranspiring, and/or biotreating stormwater runoff close to its source. LID employs principles such as preserving and recreating natural landscape features and minimizing imperviousness to create functional and appealing site drainage that treats stormwater as a resource, rather than a waste product. Practices used to adhere to these LID principles include measures such as rain barrels and cisterns, green roofs, permeable pavement, preserving undeveloped open space, and biotreatment through rain gardens, bioretention units, bioswales, and planter/tree boxes.

[328] https://www.flowstobay.org/wp-content/uploads/2024/01/C3-Regulated-Projects-Guide-2023_010524.pdf.

Table 4.14-3: Typical Best Management Practices Sequencing and Options

Description	Actions	BMP Options
1. Before Construction	Evaluate, mark, and protect areas to be protected (e.g., biological and cultural resources, underground utilities to remain).	**Scheduling.** Develop a schedule for construction sequencing that is correlated with implementation of construction site BMPs to reduce the amount and duration of soil exposed to erosion by wind, rain, runoff, and vehicle tracking at any given time. • Schedule major soil disturbing activities and activities near water bodies during the non-rainy season. • Monitor weather forecasts for seasonal and non-seasonal storms. • Contingency plans to deploy erosion, sediment control, and soil stabilization BMPs when needed on short notice.
2. Site Access Areas (construction site entrances; parking, staging, and storage areas)	Stabilize site access areas prior to earthwork.	**Tracking Controls.** Controls to reduce offsite tracking of sediment and other pollutants at defined construction site entrances and exits along with clean-up methods to prevent sediment or other materials from entering storm drains. • Minimize points of entrance/exit and require their use. • Limit vehicle speeds. • Grade construction entrances/exits to prevent runoff from the site. • Route runoff from entrances/exits through a sediment-trapping device before discharge. • Design entrances/exits to support the heaviest vehicles and equipment using them. • Select construction access stabilization (aggregate, asphaltic concrete, concrete) based on longevity, required performance, and site conditions. • Use steel plates with ribs for entrance/exit access if needed and permitted. • Use aggregate only as recommended by a geotechnical engineer. • Inspect potential sediment tracking locations routinely and sweep or vacuum sediment as needed. • If not mixed with debris or trash, incorporate removed sediment back into the project. • Avoid sweeping up any unknown potentially hazardous substance or object. • Properly dispose of sweeper wastes. • Routinely inspect for damage and assess effectiveness of BMPs; repair if access is clogged. • Where tracking has occurred on roadways, sweeping should be conducted the same day. • Keep temporary roadway ditches clear.
3. Storm Drain Inlet Protection	Install inlet protection at down-gradient inlets that project runoff/tracking might impact.	**Storm Drain Inlet Protection.** Install devices at storm drain inlets to protect against the discharge of sediment-laden storm water and non-storm water runoff from construction activities. Because such devices cause ponding to allow sediment to settle out before discharge to the storm drain, construct such devices to avoid ponding into road traffic or onto erodible surfaces, as well as to avoid overflow onto sidewalks. • Inspect inlet protection devices prior and after storm events, as well as routinely throughout the rainy season. • Remove inlet protection devices at the end of the construction, or when the inlet can no longer be impacted.
4. Perimeter Sediment Control	Install perimeter sediment controls (silt fence, fiber	**Silt Fences.** Use silt fences to intercept and slow the flow of sediment-laden sheet flow runoff before water leaves the construction site. Silt fences are typically placed:

Description	Actions	BMP Options
	rolls, etc.) as applicable prior to land disturbing activities. Install additional runoff control measures during construction as needed.	• Below the toe of exposed and erodible slopes. • Down-slope of exposed soil areas. • Around temporary stockpiles. • Along streams and channels. • Along the perimeter of a construction site. **Fiber Rolls, Gravel Bags, Sandbags.** Use fiber rolls consisting of straw, flax or other similar materials that are rolled and bound into a tight roll or a single row berm of sand or gravel bags to intercept runoff, reduce flow velocity, release the runoff as sheet flow, remove sediment.
5. Materials and Waste Storage Areas	Prepare staging areas, material storage, and disposal areas as applicable. Grade to reduce run-on and runoff, install perimeter controls, obtain clean-up materials, plastic covers for stockpiles, etc. prior to storing materials on site.	**Stockpile management.** One or more of the following options may be used to manage stockpiles and prevent stockpile erosion and sediment discharges for storm water and non-storm water runoff/run-on: • Stockpiled materials may be returned to the excavation if precipitation is forecast. • Protect stockpiles from storm water run-on using temporary perimeter sediment barriers such as berms, silt fences, fiber rolls, covers, sand/gravel bags, or straw bale barriers, as appropriate. • Keep stockpiles organized and surrounding areas clean. • Protect storm drain inlets, watercourses, and water bodies from stockpiles, as appropriate. • Implement dust control practices as appropriate on all stockpile material. • Cover, stabilize, or otherwise protect stockpiles with a perimeter sediment barrier prior to onset of precipitation. **Onsite Material Delivery and Storage** • Only store the minimum amount of material that is needed for the job. • Locate storage areas away from storm drain inlets, drainage systems, and watercourses to prevent storm water run-off from reaching the materials. • If practical, store materials in enclosed storage containers such as cargo containers. • Store materials on impervious surfaces or use plastic groundcovers to prevent any spill or leakage from contaminating the ground. • For known hazardous materials, keep materials covered using plastic or other waterproof materials. • If necessary, provide secondary containment systems around materials storage areas to prevent contaminated run-off/run-on from leaving storage area(s). • Keep an adequate supply of spill kit materials nearby. • Ensure that qualified personnel are available when hazardous materials are delivered to ensure proper delivery and storage in designated area. • When a storage area is no longer needed, promptly return it to the original condition. • Place bagged materials such as cold patch, concrete mix, and other materials with the potential to pollute runoff on pallets and under cover. **Materials Use**

Description	Actions	BMP Options
		• Reduce or eliminate use of hazardous materials onsite when practical. • Do not dispose of empty latex paint and paint cans, used brushes, paint rags, absorbent materials, and drop cloths with other construction debris until they are thoroughly dry and are no longer hazardous. • Do not remove original product labels containing safety and disposal information. • Use the entire product before disposing of the container. • When possible, mix paint indoors; otherwise, use secondary containment structures. • Do not clean paintbrushes or rinse paint containers in a street, gutter, storm drain, sanitary sewer, or watercourse. • Dispose of any paint thinners, residue, and sludge(s), that cannot be recycled, as hazardous waste. • For water-based paints, clean brushes to the extent practicable, and rinse into a concrete washout pit or temporary sediment trap. For oil-based paints, clean brushes to the extent practicable and filter and reuse thinners and solvents. • If possible, recycle residual paints, solvents, non-treated lumber, and other materials. • Do not over-apply fertilizers, pesticides, and soil amendments. Prepare only the amount needed. Strictly follow the recommended usage instructions. • Keep an ample supply of spill cleanup material near use areas. Train employees in spill cleanup procedures. • Avoid exposing applied materials to rainfall unless sufficient time has been allowed for them to dry or cure. • Hazardous materials use shall also be managed in accordance with the BMP on "Hazardous Materials/Waste Management." **Spillage Control.** Stop spillage of material if it can be done safely. Clean the contaminated area, and properly dispose of contaminated materials. For all spills, notify the project foreman and appropriate authorities. Use the following spill prevention and controls when applicable: • To the extent that it would not compromise clean-up activities, cover and protect spills from storm water run-off during rainfall. • Do not bury or dilute spills with wash water. • Store and dispose of all used clean-up materials, contaminated materials, and recovered spill material in accordance with federal, state, and local regulations (Refer to BMP on "Hazardous Materials/Waste Management"). • Use absorbent materials on spill rather than using water to hose down a spill. • When water is used for cleaning and decontamination of a spill, collect and dispose of it properly. Do not allow the water to enter storm drain inlets or watercourses. • Keep spill cleanup kits in areas where any materials are used and stored. **Solid Waste Management.** These BMPs are typically applied to construction projects that generate solid waste such as concrete, cement, asphalt rubble, masonry brick/block, vegetation debris, steel and scrap metals, pipe and electrical cuttings, non-hazardous equipment parts, Styrofoam, general trash, and other materials used to transport and package construction materials.

Description	Actions	BMP Options
		• Practice good housekeeping and keep site clean. • Use "dry" methods for site cleanup such as sweeping, vacuuming, and hand pick-up. • Designate a waste storage area onsite. If a designated onsite waste storage area is not feasible, remove wastes from the site regularly. • Prohibit littering by employees, contractors, and visitors. • Provide sufficient trash receptacles on site and/or in construction vehicles. • Protect wastes from being washed away by rainfall, storm water run-off, or other waters (irrigation, water line breaks, etc.). • For materials with the potential for spills or leaks, stockpile on impervious surfaces or use plastic groundcovers to prevent spills or leaks from infiltrating the ground. • Do not hose out or clean out dumpsters or containers at the construction site. • Prevent solid waste and trash from entering and clogging storm drain inlets. • As practicable, incorporate any removed clean sediment and soil back into the project. • Reference BMP on Stockpile Management. **Hazardous Materials/Hazardous Waste Management.** This BMP is typically used when projects involve the storage and use of hazardous materials, and the generation of waste byproducts, from petroleum products; glues, adhesives, and solvents; herbicides, pesticides, and fertilizers; paints, stains, and curing compounds; and other hazardous and toxic substances. • Comply with all federal, state and local laws regarding storage, handling, transportation, and disposal of hazardous waste. • Minimize the amount of hazardous materials stored at the construction site. Minimize the production and generation of hazardous waste at the construction site. • Cover or containerize and protect any hazardous materials and wastes from vandalism. • Clearly mark all hazardous materials and wastes. Place hazardous waste containers in secondary containment systems if stored at the construction site. • Place stockpiled cold mix on plastic and cover it with plastic. • Do not mix waste materials. Doing so complicates or inhibits disposal and recycling options and can result in dangerous chemical reactions. • Stormwater that collects within secondary containment structures must be inspected prior to being discharged to ensure no pollutants are present. Contaminated storm water must be managed per Utility Environmental Practices. • Do not allow spills to be discharged from a secondary containment system. See BMP on Spill Control. • Segregate hazardous waste from other solid waste and dispose of properly. **Contaminated Soil Management.** This contaminated soil management BMP is typically used when soil contamination is suspected or contaminated soil is encountered. Construction crews need to be particularly vigilant on construction sites where soil contamination has or may have occurred in the past from spills, illicit discharges, or leaks from

Description	Actions	BMP Options

		underground storage tanks. Contaminated soils may also be encountered during digging and trenching activities on highways and roadways. Contaminated soil wastes should be managed in accordance with the following procedures:
		• Identify contaminated soil; look for the following:
		  ○ Soil that is discolored, black, gray, or white.
		  ○ Soil that has an unusual odor, such as petroleum, acid, alkaline, sewage, solvent, or any other chemical smell.
		• If any potentially contaminated soil is detected, discontinue the activity and contact appropriate authorities.
		• Contaminated soils must be managed properly per appropriate requirements and protocols.
		• Perform routine inspection of digging and trenching operations looking for contaminated soils.
		• Manage all soils with unknown contaminants as hazardous substances, in accordance with federal, state, and local laws.
		Sanitary Waste Management. This BMP is typically used on construction sites with temporary or portable sanitary/septic waste systems.
		• Locate temporary sanitary facilities away from drainage facilities, watercourses, and traffic circulation. When subjected to high winds or risk of high winds, secure temporary sanitary facilities to prevent overturning.
		• Do not bury or discharge sanitary wastewater, except to a properly permitted sanitary sewer discharge facility.
		• Use only reputable, licensed sanitary/septic waste haulers.
		• Empty temporary sanitary facility's holding tanks prior to transport.

6. Earthwork (trenching, excavation, grading, surface roughening, grubbing)	Begin excavation, trenching, or grading after installing applicable sediment and runoff control measures. Install additional control measures as work progresses as needed.	Each of the above BMPs could be appropriate, depending on the specific location and activity being undertaken.
7. Surface Stabilization (temporary and permanent seeding, mulching)	Apply temporary or permanent soil stabilization measures as applicable on all disturbed areas where work is delayed or completed.	**Preserve Existing Vegetation** • Preserve existing vegetation whenever possible. • Locate construction material, equipment storage, and parking areas outside the drip line of any tree to be retained. • Remove any markings, barriers, or fencing after project is completed. **Temporary Soil Stabilization** • Use one or more temporary soil stabilization practices, such as hydraulic mulch, hydro seeding, soil binders, straw mulch, geotextiles, plastic covers, erosion control blankets/mats, fiber rolls, or gravel bags or sandbags.

Description	Actions	BMP Options

		Hydraulic Mulch. Hydraulic mulch is typically applied to disturbed areas requiring temporary protection until permanent vegetation is established. Avoid use in areas where the mulch would be incompatible with immediate earthwork activities and would have to be removed.
		• Avoid mulch over-spray onto the traveled way, sidewalks, lined drainage channels, or existing vegetation.
		• Maintain an unbroken, temporary mulched ground cover throughout the period of construction when the soils are not being reworked. Inspect before expected rainstorms and repair any damaged ground cover and re-mulch exposed areas of bare soil.
		• Hydraulic Mulches:
		  ○ Apply as a liquid slurry using a hydraulic application machine (i.e., hydroseeder) at rates of mulch and stabilizing emulsion recommended by the manufacturer.
		• Hydraulic Matrices:
		  ○ Apply a combination of wood fiber and/or paper fiber mixed with acrylic polymers as binders. Apply as a liquid slurry using a hydraulic application machine (i.e., hydroseeder) at rates recommended by the manufacturer.
		• Bonded Fiber Matrix (BFM)
		  ○ Apply BFM using a hydraulic application machine (mulch and tackifier are premixed in a single bag) in accordance with manufacturers instruction. Do not apply immediately before, during, or after a rainfall.
		Hydroseeding. Hydroseeding typically consists of applying a mixture of fiber, seed, fertilizer, and stabilizing emulsion with hydro-mulch equipment, which temporarily protects disturbed soil areas from erosion.
		• Avoid use of hydroseeding in areas where it would be incompatible with future earthwork activities and would have to be removed such as:
		  ○ Steep slopes that are difficult to protect with temporary seeding.
		  ○ Temporary seeding that may not be appropriate in dry periods without supplemental irrigation.
		  ○ Temporary vegetation that may have to be removed before permanent vegetation is applied.
		  ○ Temporary vegetation that is not appropriate for short-term inactivity.
		• Hydroseeding can be accomplished using a multiple-step (with straw mulch) or a one-step process (mixed with hydraulic mulch, hydraulic matrix, or bonded fiber matrix). When the one-step process is used to apply the mixture of fiber, seed, etc., increase the seed rate to compensate for all seed not having direct contact with the soil.
		• Prior to application, roughen the slope, fill area, or area to be seeded with the furrows trending along the contours.
		• Apply a straw mulch as necessary to keep seeds in place and to moderate soil moisture and temperature until the seeds germinate and grow.
		• Avoid over-spray onto the travel way, sidewalks, drainage channels, and existing vegetation.

Description	Actions	BMP Options
		• Inspect seeded areas for failures and re-seed, fertilize, and mulch within the planting season, using not less than half the original application rates. Any temporary revegetation efforts that do not provide adequate cover are to be revegetated. • After any rainfall event, maintain all slopes to prevent erosion. **Soil Binders.** Soil binders are typically applied to disturbed areas requiring short-term temporary protection. Because soil binders can often be incorporated into the work, they may be a good choice for areas where grading activities will soon resume. • Binders have the following limitations: o Soil binders generally experience spot failures during heavy rainfall and may need reapplication after storm and do not hold up to pedestrian or vehicular traffic. o Soil binders may not penetrate soil surfaces made up primarily of silt and clay, particularly when compacted. o Some soil binders may not perform well with low relative humidity. Under rainy conditions, some agents may become slippery or leach out of the soil. • Follow manufacturer's recommendations for application procedures and cleaning of equipment after use. Any onsite cleaning must use appropriate BMPs for pollution prevention plans. • Do not apply soil binders during or immediately before rainfall, as they require a minimum curing time of 24 hours before they are fully effective. • Avoid over-spray onto traveled way, sidewalks, lined drainage channels, sound walls, and existing vegetation. **Straw Mulch.** Straw mulch is typically used when temporary soil stabilization surface cover is needed on disturbed areas until soils can be prepared for re-vegetation and permanent vegetation is established. It is often used in combination with temporary and/or permanent seeding strategies to enhance plant establishment. • A tackifier is the preferred method for anchoring straw mulch to soil on slopes. Tackifiers act to glue the straw fibers together and to the soil surface, and the tackifier shall be selected based on longevity and ability to hold fibers in place. Soil binders (tackifier) will generally experience spot failures during heavy rainfall events. • Avoid placing straw onto the traveled way, sidewalks, lined drainage channels, sound walls, and existing vegetation. • Straw mulch with tackifier shall not be applied during or immediately before rainfall. • Apply loose straw at a minimum rate of 4,000 pounds per acre, either by machine using a straw blower or by hand distribution. • Distribute the straw mulch evenly on the soil surface. • Anchor the mulch in place by using a tackifier or by "punching" it into the soil mechanically. "Punching" of straw does not work in sandy soils. • Methods for holding the straw mulch in place depend on slope steepness, accessibility, soil conditions, and longevity. If selected method is incorporation of straw mulch into the soil, then do as follows: o On small areas, a spade or shovel can be used.

Description	Actions	BMP Options
		○ On slopes with soils that are stable enough and of sufficient gradient to safely support construction equipment without contributing to compaction and instability problems, straw can be "punched" into the ground using a knife-blade roller or a straight bladed coulter, known commercially as a "crimper." ○ On small areas and/or steep slopes, straw can also be held in place using plastic netting or jute. The netting shall be held in place using 11-gauge wire staples, geotextile pins, or wooden stakes (as described BMP on "Geotextiles, Plastic Covers Erosion Control Blankets/Mats"). **Geotextiles, Plastic Covers Erosion Control Blankets/Mats.** These methods are typically used when disturbed soils may be particularly difficult to stabilize or access, including steep slopes or channels to be revegetated. Because plastic covers result in 100 percent runoff, their use is typically limited to covering stockpiles or covering small graded areas for short periods, such as through an imminent storm event, until alternative measures can be installed.
8. Construction and Paving (install utilities, buildings, paving)	Implement applicable control practices as work takes place.	**Dewatering Operations.** This BMP is applicable to trench or excavation dewatering. Discharges of non-storm water from a trench or excavation that contain sediments or other pollutants to the sanitary sewer, storm drain systems, creek bed (even if dry), or receiving waters is typically prohibited. Water from dewatering activities is generally allowed to be discharged if the water does not contain any sediment or other pollutants. Generally, non-contaminated discharges of non-storm water to lands (such as infiltration) are allowed. This BMP is not applicable to utility vault or sub structure dewatering. For these applications, refer to the BMP for Dewatering Utility Substructures and Vaults. This BMP is also not applicable if the water is known, or suspected to be, contaminated. • Use water where possible for construction activities such as compaction and dust control. If used for these applications, ensure that the water will infiltrate and not run-off from the land to storm drain systems, creek beds (even if dry), or receiving waters. • If water is to be discharged to land for infiltration: ○ The water may contain sediments but must not be contaminated with other pollutants. ○ The water must not run-off to storm drain systems, creek beds (even if dry), or other surface waters. • Water from dewatering that contains only sediment may be discharged if the sediment is allowed to settle out or the sediment is filtered out first. Alternatively, a vacuum truck may be used to remove the water and haul it to an authorized discharge location. • If a permit is required, provide temporary onsite storage of water removed from trenches, excavations, etc., until a permit to discharge is obtained. • If a permit is obtained for discharge to a storm water or sanitary sewer system, conduct all dewatering discharge activities in accordance with permit requirements. **Paving Operations.** This BMP is typically used for pavement surfacing, resurfacing, removal, or patching applications of: cold mix, asphalt, chip seal, seal coat, tack coat slurry seal, fog seal, or Portland cement concrete. For pavement grinding, saw cutting, coring or drilling, refer to BMP Concrete/Coring/Saw Cutting and Drilling Waste Management. • Protect storm drain inlets near work and down gradient of the area to be paved.

Description	Actions	BMP Options

		• If onsite mixing is planned then an area must be designed for conducting the mixing. This area should be paved or made impervious (e.g., plastic or wood sheeting) and be located away from storm drain inlets or watercourses.
		• Minimize overspray of tackifying emulsions or placement of other paving materials beyond the limits of the area to be paved.
		• Use dry methods to clean equipment and conduct cleaning in accordance with the BMP on Vehicle and Equipment Washing.
		• Material use and stockpiles to be managed in accordance with BMPs on Material Use and Stockpile Management.
		• Collect and remove all broken asphalt and concrete, recycle when feasible, and dispose of materials in accordance with local, state, and federal requirements.
		• Do not apply asphalt, concrete paving, seal coat, tack coat, slurry seal, or fog seal if rain is expected during the application or curing period.
		  ○ Avoid, if possible, transferring, loading, or unloading paving materials near storm drain inlets or watercourses. If not possible, use BMP on Storm Drain Inlet Protection.
		Vehicle and Equipment Washing. Use these procedures on all construction sites where vehicle and equipment cleaning is performed. Note that onsite vehicle and equipment washing is not typically performed on utility construction projects.
		• Use "dry" cleaning methods such as wiping down, rather than water washing vehicles or equipment.
		• Whenever possible, washing should not be conducted at the construction site.
		• If onsite vehicle washing is authorized by the Environmental Representative, use the following methods:
		  ○ Locate vehicle and equipment washing away from storm drain inlets, drainage systems, or watercourses.
		  ○ Place sandbags or another type of berm around storm drain inlets and drainage systems to prevent wash water from entering a storm inlet, drainage system, or watercourse.
		  ○ Never discharge wash water to the storm drain system.
		  ○ Use as little water as possible, such as by using high-pressure sprayers instead of a hose.
		  ○ Use a positive shutoff valve to minimize water usage.
		Vehicle and Equipment Fueling. This BMP is typically used for projects where onsite fueling of vehicles and equipment, including handheld equipment, is planned. Onsite fueling of vehicles and equipment is not typical unless it is impractical to send vehicles and equipment off site for fueling. Handheld equipment is treated separately from other equipment. Handheld equipment includes those smaller, manually operated pieces of equipment such as trenchers, mowers, chainsaws, generators, and other equipment that needs fueling during regular daily operation.
		• If practical, fuel vehicles and equipment off site.
		• Mobile fueling equipment is the preferred equipment used for onsite fueling.
		• Locate fuel storage and fueling areas away from storm drain inlets, drainage systems, and watercourses.

Description	Actions	BMP Options
		• Conduct fueling with the fueling operator always in attendance regardless of whether fuel nozzles are equipped with automatic shutoff features. • Fuel tanks are not to be "topped off." • Have spill containment and cleanup equipment and materials readily available. • Clean up any spills immediately and properly dispose of contaminated materials. • Properly store and dispose of rags and absorbent material used to clean up any spilled fuel. • Ensure that mobile fueling trucks and operators have all necessary permits, licenses, and training. • Ensure that an adequate supply of spill cleanup materials and trained personnel are available. **Concrete/Coring/Saw Cutting and Drilling Waste Management.** Typically used in projects where concrete and asphalt are used or where slurry or pavement/concrete wastes are generated by construction activities, including saw cutting; coring/drilling; grinding, repaving, or patching; encasing conduit in concrete; and footings. • Install storm drain protection at any down-gradient inlets that may be impacted by the activity. See the BMP on Storm Drain Inlet Protection. • Minimize the amount of water used during coring/drilling or saw cutting. During wet coring or saw cutting, use shovel or wet vacuum to lift the slurry from the pavement. Additionally, if wet vacuuming is not adequate to capture wastewater from the activity, used sandbag barriers or other containment. • If concrete residue remains after drying, sweep up the area and remove residue to avoid contact with storm water entering a storm drain or water body via the wind. • Do not wash residue or particulate matter into a storm drain inlet or watercourse. • Use the following options for concrete truck chute and/or pump and hose washout: o If available, arrange to use an existing concrete washout station. Upon entering site, instruct concrete truck drivers about practices being used on site. o Concrete Washouts: Washout Stations can be a plastic lined, temporary pit or bermed area designed with sufficient volume to completely contain all liquid and waste concrete materials plus enough capacity for rainwater. Locate the designated area away from storm drain inlets or watercourses. o Washout in Trench: Manually rinse the concrete truck chute into the trench itself. o Bucket Washout: Manually rinse the chute into a wheelbarrow, plastic bucket or pail, and then empty the bucket into the concrete truck barrel or on top of the placed concrete. **Dewatering Utility Substructures and Vaults.** The discharge of water from dewatering of vaults and substructures to the storm drain is allowed under an existing NPDES permit (General Permit CAG990002, Order No. 2001-1-DWQ). General requirements for discharge under this permit are listed below. • Discharges to land require prior approval from the landowner. • If the water to be discharged conforms to the practices within the EP, the discharge is allowed. • During discharge, do not allow pollutants (e.g., sediment) to come in contact with the discharge. For example, if there is pre-existing soil in the path of the discharge (i.e., gutter), it must be swept up or avoided before discharging the substructure water.

Description	Actions	BMP Options

		Vegetation Management Including Mechanical and Chemical Weed Control. Vegetation control may consist of manual or mechanical removal of vegetation and/or chemical treatment.
		• General Vegetation Management Procedures:
		  ○ Do not allow vegetation debris to enter storm drain inlets and watercourses.
		  ○ Identify drain inlets and watercourses, both upstream and downstream of the work site(s).
		  ○ Pre-plan the work to protect storm water drainage systems and watercourses from discharge of potential pollutants, and maintain equipment in good operating condition.
		  ○ Set up the work area to minimize tracking of material by vehicles and equipment in or out of the work area.
		• Good Housekeeping Practices:
		  ○ Properly collect and dispose of litter and debris.
		  ○ Secure containers of liquids with lids until needed.
		  ○ Transport collected non-hazardous materials for proper disposal. If the material is a hazardous waste, follow the BMP on Hazardous Materials & Hazardous Waste Management.
		  ○ If a leak or spill occurs, protect drainage systems and watercourses from spilled material; follow the BMP on Storm Drain Inlet Protection.
		• Mechanical Weed Control. "Mechanical" is the physical removal of weeds or unwanted vegetation growing around electric utility poles and electric distribution or transmission structures for fire control:
		  ○ Do not stack or leave removed weeds or vegetation or other debris on or near drain inlets or in the storm water drainage system or watercourses.
		  ○ Do not fuel equipment next to drain inlets or place fuel or oilcans near or in watercourses, the storm drainage system or next to a drain inlet.
		  ○ Because of fire control requirements, do not leave cut vegetation around structures.
		• Chemical Weed Control. This method of weed and vegetation control uses herbicides to eliminate weed growth and control vegetation growth year-round for fire control. To achieve effective vegetation control through chemical means and protect the environment:
		  ○ Use the correct herbicides for the application.
		  ○ Do not use chemical vegetation control prior to a forecasted rain event.
		  ○ Apply pesticides only as specified on the "Pesticide Use Recommendation" on the label. The pesticide label is considered the law, and use of an herbicide inconsistent with the label is considered a violation. Follow safety and application methods as specified in the Annual Pesticide Safety Training.
		  ○ Follow the Herbicide/Pesticide application protocol when near storm water drainage systems or watercourses.
		  ○ Calibrate the spray rig as needed to ensure accurate application of herbicides.
		  ○ Record the use of all herbicides.

Description	Actions	BMP Options
		○ Avoid using overhead irrigation for as long as recommended by the chemical manufacturer of pesticides or post-emergents. ○ Avoid applying post-emergents prior to a predicted rain event. **Over-Water Protection.** Applies to projects where construction, maintenance, or repair activities such as chipping, grinding, scraping, welding/burning, painting, wrapping, and coating of pipes and conduits will be conducted above surface waters. • Prior to conducting over-water activities, confirm the need for permits with appropriate local and state agencies. • Properly design and install containment systems prior to the beginning of any operation that may impact a water body to prevent discharge of pollutants to surface waters. • Keep work areas clean of all trash and potential pollutants. • Place containment booms around the work area as necessary to contain discharge of contaminants such as oil and hydraulic fluid. • Give special attention to existing and forecasted wind and weather conditions to prevent pollutant discharges to surface waters. • Use shrouds to prevent paint overspray, welding slag, and other pollutants from entering surface waters and being dispersed into the air. Note that shrouding may not be effective during periods of high wind. • Ensure that shrouds are large enough to adequately enclose or segregate the working area from surface waters. This may include plywood barrier, visqueen, and scaffolding to help prevent fugitive material from entering surface waters. • Use support structures such as scaffolding in conjunction with shrouding to withstand potential wind stress. • Thoroughly clean or properly dispose of contaminated shrouding material and equipment. **Removal of Underground Utility Location/Mark-Out Paint.** This BMP is typically used when utility projects involve mark-out by painting surfaces where underground utilities are located and where paint is required to be removed by local jurisdictions or another authority. • Use non-toxic, light degradable mark-out paint when possible. • Hydro Pressure wash. • Dry abrasive blast/grinding. • Wet abrasive blast/grinding. • Wet/Dry Vacuum. • Dry Sweep. • Install storm drain inlet protection at adjacent down gradient inlets during wet hydro pressure washing and wet abrasive blasting and grinding. • Minimize the amount of water used during hydro washing. • Use shovel or wet vacuum to lift the paint slurry from the pavement or surface.

Description	Actions	BMP Options
		• If wet vacuuming is not adequate to capture all wastewater from these activities, use additional containment (sandbags, booms, or other containment devices) methods near the work area to prevent the discharge to a storm drain inlet or watercourse. • If paint residue remains after drying, sweep up the area and remove residue to avoid contact with storm water. • If paint residue remains after sweeping, the area can be water washed, provided that water containing the paint residue is not allowed to enter storm drain inlets or watercourses. • Dispose of all waste using the BMPs for Liquid Waste Disposal.
9. Final Stabilization and Landscaping	Stabilize open areas. Remove temporary control measures and install final stabilization controls (topsoil, trees and shrubs, permanent seeding, mulching, sodding, and riprap).	Vegetation Management Including Mechanical and Chemical Weed Control (see above) Hydraulic Mulch (see above) Hydroseeding (see above)

The treatment measures would vary from "local" improvements at individual construction sites to "areawide" concepts. The treatment BMPs would be required to include one or more of the following: bioretention areas (including bioretention swales), flow-through planters, tree well filters, vegetated buffer strips, infiltration trenches, extended detention basins, pervious paving, green roofs, and media filter. Features within the footprint of the former landfill that would encourage infiltration would require use of subdrains due to the low permeability cap and the need to avoid creation of leachate within the waste materials. Use of green roofs, planter boxes, and other treatment measures such as mechanical filters, retention basins, and other similar methods would also be appropriate.

Grading and construction activities, including landfill closure and subsequent habitat and recreational improvements along Visitacion Creek and the north shore of the lagoon, would be required to comply with General Construction Activity (Construction General Permit, Order No. 2009-0009-DWQ, as amended by 2010-0014-DWQ and 2012-0006-DWQ) and the General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Order WQ 2022-0057-DWQ). Such compliance would reduce construction impacts to less than significant. As noted in **Table 4.14-3**, above, operational BMPs generally call for applying pesticides only as specified on the "Pesticide Use Recommendation" on the label. Regardless, because of the large area within the Baylands being landscaped and subject to pesticide use, a significant water quality impact would nevertheless result.

Program EIR Mitigation Measures

MM HWQ-1: Integrated Pest Management (Program EIR Mitigation Measure 4.H-5). Prior to issuance of an occupancy permit for site-specific development within the Baylands, an integrated pest management plan shall be prepared and implemented, subject to City review and approval, to set forth a preventative, long-term, low toxicity program to control pests. The plan shall provide guidelines for landscape and building maintenance with the emphasis on minimizing the use of pesticides while controlling pests. At a minimum, the integrated pest management plan shall include:

- ***Identification of acceptable pest levels*** (action thresholds) with an emphasis on *control*, not *eradication*, identifying site and pest specific action thresholds, and the controls to be used if those thresholds are exceeded.
- ***Preventive practices:*** Design, construction, and maintenance of landscape facilities, and buildings, as well as operation of uses that prevent or minimize pest problems would include integrated pest management strategies, sanitation practices, and proactive maintenance to minimize pest infestations.

- ***Monitoring:*** Regular observation, including inspection and identification.
- ***Mechanical controls:*** Should a pest reach an unacceptable level, provide for mechanical methods as the first options, including include simple hand-picking, erecting insect barriers, using traps, vacuuming, and tillage to disrupt breeding.
- ***Biological Controls:*** Provide for use of natural biological processes and materials for control, including promoting beneficial insects that prey on target pests and biological insecticides derived from naturally occurring microorganisms.
- ***Responsible Pesticide Use:*** Provide for use of synthetic pesticides generally only as required when preferred methods are infeasible or ineffective, including use of the least toxic pesticide that will do the job and is the safest for other organisms and for air, soil, and water quality; use of pesticides in bait stations rather than sprays; or spot-spraying rather than general application.

Significance Conclusion for Impact HWQ-1 with Implementation of Program EIR Mitigation Measures

Implementation of Mitigation Measures MM GEO-4a (Program EIR Mitigation Measure 4.E-4a) and MM HWQ-1 (Program EIR Mitigation Measure 4.H-5) would minimize use of chemical pesticides and herbicides within the Baylands and, in combination with NPDES permit requirements and compliance with SWPPPs and Provision C.3, would reduce impacts to less than significant.

b. Impact HWQ-2: Groundwater Recharge and Sustainable Management

Methodology for Determining Significance

The analysis of impacts on groundwater considers changes in groundwater recharge due to increases in impervious surfaces, increase in water demand, and the condition of the local groundwater basin.

Impacts are considered significant if the Specific Plan would result in a depletion of groundwater supplies or interfere with groundwater recharge such that the 2025 Specific Plan project would impede implementing sustainable management of a groundwater basin or there would be a lowering of the groundwater levels causing subsidence.

Impact Assessment

Depletion of Groundwater Supplies for Potable or Non-Potable Water Use

Baylands development would increase demands for water supplies. Groundwater is not currently used within the Baylands for potable or non-potable purposes and no groundwater use is proposed by the Specific Plan. Brisbane purchases potable water from the SFPUC, which obtains its water supplies primarily from the Hetch Hetchy Reservoir in Yosemite National Park; however, occasionally the water may be supplemented or come directly from SFPUC's reservoirs in the East Bay or San Mateo Peninsula.

The Visitacion Valley Basin within which the Baylands, Sierra Point, and Beatty areas are located, is categorized as a very-low priority basin according to the DWR Bulletin 118 basin priority classification (Cal Water 2024). Remedial Action Plans approved by regulatory agencies for the western portion of the Baylands and the final landfill closure plan conditionally approved by the Regional Water Quality Control Board prohibit extraction or use of groundwater underlying the Baylands without a Groundwater Management Plan pre-approved by the appropriate state regulatory agency.

As discussed in Section 4.16, *Utilities, Service Systems, and Water Supply*, of this EIR, water supply for Baylands development would come from the California Water Service Company (Cal Water), which operates five groundwater production wells within the Westside Basin to supply its South San Francisco District. The Westside Basin is not adjudicated, not in a condition of critical overdraft, and is designated by DWR as low priority (Cal Water 2024). Pursuant to the Regional Groundwater Storage and Recovery Project, Cal Water and the other municipal pumpers within the South Westside Basin self-limit pumping to no more than 6.9 mgd, of which Cal Water's designated quantity is an annual average rate of 1.37 mgd or 1,534 afy. As indicated in the Baylands Water Supply Assessment, Cal Water does not project any extractions from the South Westside Basin in excess of its agreed upon 1,534 afy limit.

Interference with Groundwater Recharge

Prior to Baylands development within the eastern portion of the site, the required construction of a landfill cap within the former landfill area would prevent infiltration of water through the waste matrix into the underlying groundwater basin.[329] Proposed Specific Plan development would retain approximately 29.5 percent of its Year 2100 land area (532.3 acres) in open space/open area. Thus, approximately 375.3 acres of impervious surface area would be constructed within the Baylands for residential, commercial, public facilities, and infrastructure

[329] According to the Final Closure and Post-closure Maintenance Plan for the former landfill required under Title 27 of the California Code of Regulations and the RWQCB Waste Discharge Order 01-041 (described in Section 4.G, *Hazards and Hazardous Materials*), the design of the soil cap requires that infiltration is minimized to the maximum extent possible in order to prevent accumulation of leachate within the underlying waste material.

uses, encompassing approximately 70.5 percent of the site's Year 2100 land area. This calculation is conservative given that some of the BMPs described above require bioswales and other permeable surfaces to be included as part of the developed areas of the project.

Significance Conclusion for Impact HWQ-2

Baylands development would not interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level that could impede sustainable management of a groundwater basin or cause subsidence for the following reasons:

- Visitacion Valley Groundwater Basin
    - Local groundwater is not proposed to be used for potable or non-potable purposes as part of Baylands development.
    - Provision C.3 of the NPDES Municipal Regional Stormwater Permit requires runoff during a storm event be retained or detained onsite such that post-development peak flows do not exceed pre-development conditions. Release of stormwater flows to unlined drainages in the Ecological Park and Visitacion Creek will reduce loss of groundwater recharge due to increased impervious surface area within the Specific Plan.
    - Title 27 requirements for final closure of the former Brisbane Landfill requires installation of a landfill cap to prevent infiltration from the ground surface through the waste matrix in the former landfill. Thus, loss of pervious surface area within the landfill footprint is the result of final landfill closure, which is required to precede Baylands development, rather than to Baylands development itself.
    - As shown in **Figure 4.14-2**, the Visitacion Valley groundwater basin overlies the Brisbane Lagoon, which will continue to recharge the basin.
    - Approximately 26 acres of the Baylands will become subject to daily inundation as the result of projected sea level rise, providing continuous recharge to the basin and thereby preventing subsidence.
    - As a very low priority basin, compliance with the Sustainable Groundwater Management Act within the Visitacion Valley Basin is not required.
- Westside Groundwater Basin
    - The Westside Basin is not in a condition of critical overdraft and is designated by DWR as low priority.

- As indicated in the Baylands Water Supply Assessment, Cal Water does not project any extractions from the South Westside Basin in excess of its agreed upon 1,534 afy limit for groundwater extractions.

Impacts associated with groundwater recharge and sustainable management would therefore be less than significant.

c. Impact HWQ-3: Flood Hazards

Methodology for Determining Significance

Threshold HWQ-3 focuses on the physical environmental effects (flooding on- or off-site). In relation to increases in the rate or amount of runoff and flooding, on- or off-site, a significant impact would result if increased runoff generated by Baylands development would increase stormwater flow rates so as to overload an area's storm drain system or otherwise cause or exacerbate flooding of properties within or adjacent to on and offsite Baylands development. To determine whether such an impact would occur, the capacity of the Specific Plan's proposed storm drainage system to convey post-development storm flows was evaluated based on clear and measurable performance standards based on Program EIR Mitigation Measure 4.H-4a, compliance with which the Brisbane City Council previously determined would reduce flooding impacts to less than significant. Thus, exceedance of the following criteria would be indicative of a significant environmental effect:

- The peak flow rate from a 25-year storm event would not be accommodated entirely within open drainage courses and an underground piping system such that Baylands roadways or recreational facilities would be flooded;
- The peak flow rate from a 100-year storm event would not be accommodated within open drainage courses, an underground piping system, and within streets such that the finished floor elevation of any building within the Baylands would be lower than a minimum of 1 foot above the 100-year storm event hydraulic grade line water elevation with tidal flow and Year 2100 projected sea level rise; or
- Key roadways including Sierra Point Parkway, Lagoon Road, Geneva Avenue, and Tunnel Avenue not being available as evacuation routes in the event of a 100-year storm-surge event in the Bay and Year 2100 projected sea level rise.
- Increased hazard from emergent groundwater with Year 2100 projected sea level rise.

In addition, a significant impact would result if Specific Plan development would increase flooding frequency, duration, or depth at any existing on-site use or off-site location.

Impact Assessment

The Baylands Specific Plan proposes moving approximately 2.5 million cubic yards of soil from the eastern (former landfill) portion of the Baylands to the western (former railyard) portion, providing for finished floor elevations within the western portion of the Baylands at a minimum 19 feet NAVD88.

The proposed drainage system for the Baylands would accommodate:

- The 25-year design storm event within designated drainage courses and underground pipes; and
- The 100-year design storm event carried within designated drainage courses, underground pipes, and Specific Plan streets.

Thus, the peak flow from a 25-year storm event would not cause flooding along Baylands roadways or within recreational open areas.

In addition, the peak flow from a 100-year storm event would not generally cause flooding within Baylands development areas, including roadways and recreational facilities, since the finished floor elevations of Baylands buildings would have a minimum of 1 foot of freeboard above the 100-year storm event hydraulic grade line water elevation with tidal flow and Year 2100 projected sea level rise. Flows to San Francisco Bay through the existing 10-foot by 10-foot box culvert under US 101 experience increased friction losses as sediment and refuse continue to build up. With sufficient precipitation and tidal action, the San Francisco Bay outfall will be submerged; however, water will not overtop the upstream drainage channel due to excess capacity along Visitacion Creek.

The unfinished basement floors of Baylands buildings along the west side of the Caltrain right-of-way are proposed in an area subject to a 100-year flood to accommodate parking garages. Such unfinished basement parking garages would not be subject to the finished floor requirement of being at or above the base flood elevation (100-year flood with 6.5 feet of SLR). Thus, basement areas along Frontage Road, as well as the roadway itself, would not be accessible in a 100-year flood with 6.5 feet of sea level rise. Although the lowest finished floor elevations of these buildings would be a minimum of 1 foot above the base flood elevation in compliance with applicable flood protection requirements, subterranean parking areas would be subject to inundation in a 100-year flood and 6.5 feet of sea level rise.

Properties at the intersection of Industrial Way and Bayshore Boulevard, including the Bayshore Sanitary Pump Station and adjacent buildings, are located at an existing low point along Bayshore Boulevard and are either fully, or partially below future 100-year storm elevation with tidal flow and estimated Year 2100 High Scenario SLR. These properties are not owned by the applicant and the Specific Plan would not change the elevation of these properties

and their street access.[330] Because Provision C.3 requirements mandate site-specific development projects to capture, control, treat, and/or infiltrate stormwater falling on their site such that the rate and volume of stormwater exiting their site is equal to or less than existing conditions, the Specific Plan would not subject these existing use areas to increased flooding risk.

In addition, existing grades within the eastern portion of the Baylands adjacent to the Kinder Morgan Tank Farm and the Brisbane corporation yard, as well as the Caltrain right-of-way are lower than 100-year flood elevations with the addition of Year 2100 projected sea level rise. The Baylands Specific Plan proposes leaving these properties and their street access at current elevations.[331] The combination of (1) leaving roadways in front of these properties at their existing grade and (2) concentrating stormwater runoff within Baylands streets would increase flood hazards and damage to existing structures would preclude the use adjacent streets for emergency response and as evacuation routes during a 100-year flood event.

Along the shoreline, groundwater levels and the water table will rise as a consequence of sea level rise elevating San Francisco Bay water levels. Rising groundwater can infiltrate storm drains, destabilize and corrode buried infrastructure, spread soil or groundwater contamination, undermine building foundations, and increase liquefaction hazards.[332] In some cases, sea level rise can cause groundwater levels to raise high enough that groundwater can emerge on the land surface in low-lying areas and cause flooding, an effect known as "emergent groundwater." As shown on **Figure 4.14-6**, regional studies of existing conditions have indicated that emergent groundwater could cause flooding within the large portions of the Baylands based on existing ground levels. However, this mapping takes a simplistic approach to predicting inland groundwater levels, does not account for proposed landfill remediation, and does not account for the Specific Plan adding fill on the western Plan area.

Site-specific groundwater modeling was undertaken as part of site remediation and landfill closure planning, including evaluation of the effects of sea level rise of 6.9 feet by Year 2100.[333] **Figure 4.14-7** indicates that the site-specific modeled change in water table elevations due to 6.9

[330] The Baylands Infrastructure Report states that these properties "may need to be raised, have pump stations installed, or employ another strategy to protect … (them) from the impacts of anticipated SLR (sea level rise). As these buildings are not controlled by the developer, they will require measures by others to adapt to future conditions (BKF 2023).

[331] The Baylands Infrastructure Report states, "Raising grades in these areas is constrained by existing improvements that are to remain and the need to avoid causing settlement of the railroad tracks. These properties, if they remain at existing grades, will require measures by others to adapt to future conditions. If required in the future, in response to SLR, drainage systems in these areas can be installed with pump stations and back flow devices in order to protect existing streets and buildings during large storm events, subject to approval of the City of Brisbane and property owners" (BKF 2023).

[332] Ocean Protection Council. 2024. State of California Sea Level Rise Guidance. https://opc.ca.gov/wp-content/uploads/2024/05/California-Sea-Level-Rise-Guidance-2024-508.pdf.

[333] Geosyntec Consultants, Inc. Groundwater Modeling to Evaluate Potential Influence of Sea Level Rise on Groundwater Levels, The Baylands, Brisbane, California. March 23, 2022.

feet of sea level rise would be a decrease in the water table elevation across the majority of the Specific Plan area. The decrease in the calculated water table elevations for Year 2100 are due to the leachate collection and recovery system trenches that are to be installed along the south and east side of the landfill as part of the final landfill closure. As is also shown in **Figure 4.14-7**, modeling with 6.9 feet of sea level rise shows increases in water table elevations of approximately 2 feet in the central portions of OU-2 and OU-SM west of the landfill and increases in the water table elevation of up to a few feet in the Baylands and Guadalupe Creek valley west of the Brisbane Lagoon, and in the Visitacion Valley north and west of the northern portion of the Specific Plan area. Because the western portion of the Baylands would be raised by proposed site grading, Specific Plan development would not be subject to flooding due to emergent groundwater.

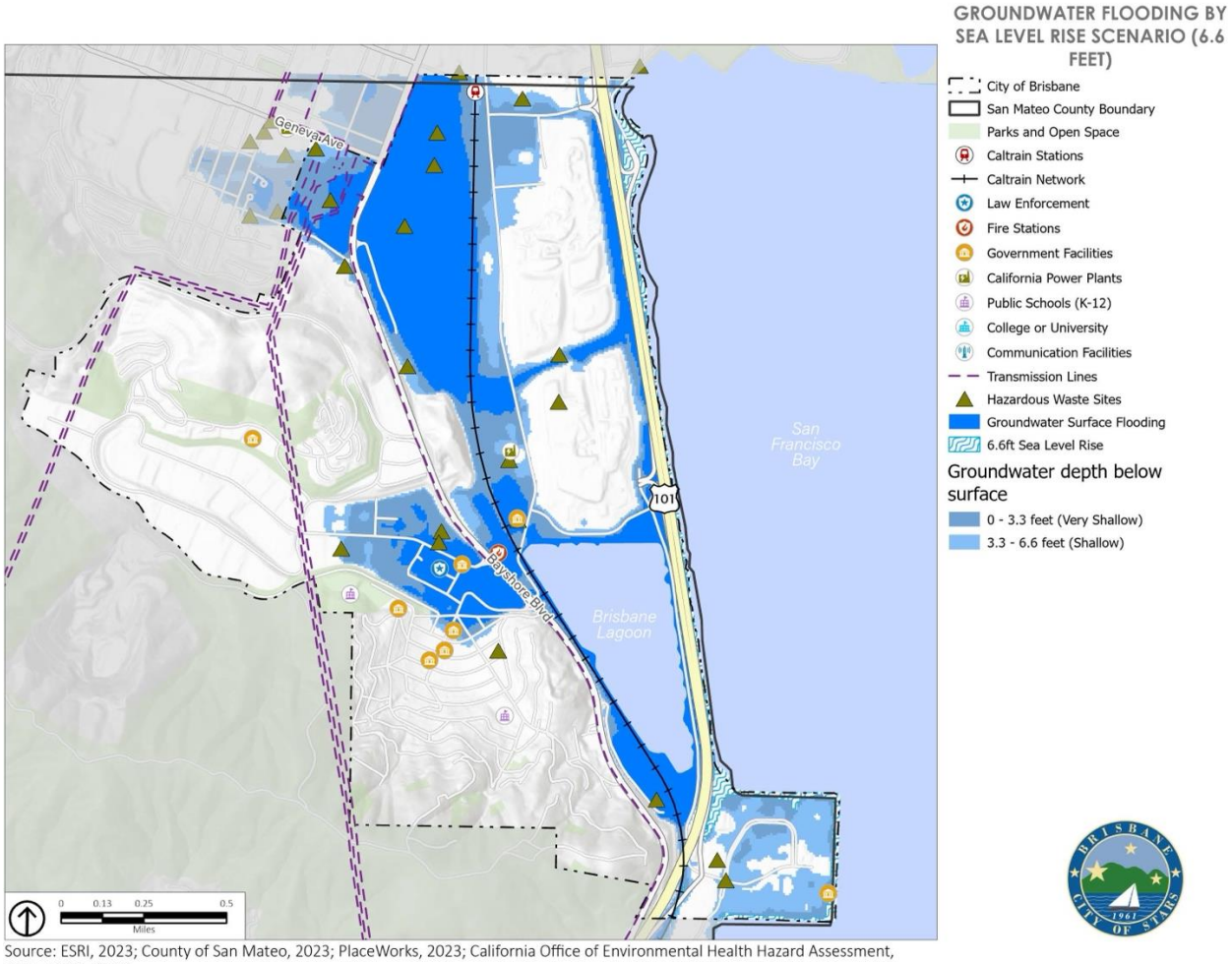
Significance Conclusion for Impact HWQ-3

Baylands development would provide adequate flood protection for new residential, commercial, and other uses within the Baylands because:

- The peak flow rate from a 25-year storm event would be accommodated within designated drainage areas and an underground piping system;
- The peak flow rate from a 100-year storm event would be accommodated within an underground piping system, designated drainage areas, and within streets such that the finished floor elevations of buildings would have more than 1 foot of freeboard above the 100-year storm event hydraulic grade line water elevation with tidal flow and Year 2100 projected sea level rise; and
- To provide this level of protection, the final design for Baylands drainage features, including Visitacion Creek, will be required to use the capacity of the existing culvert under the US 101 freeway based on the culvert's actual and projected capacity rather than the theoretical capacity of the culvert.

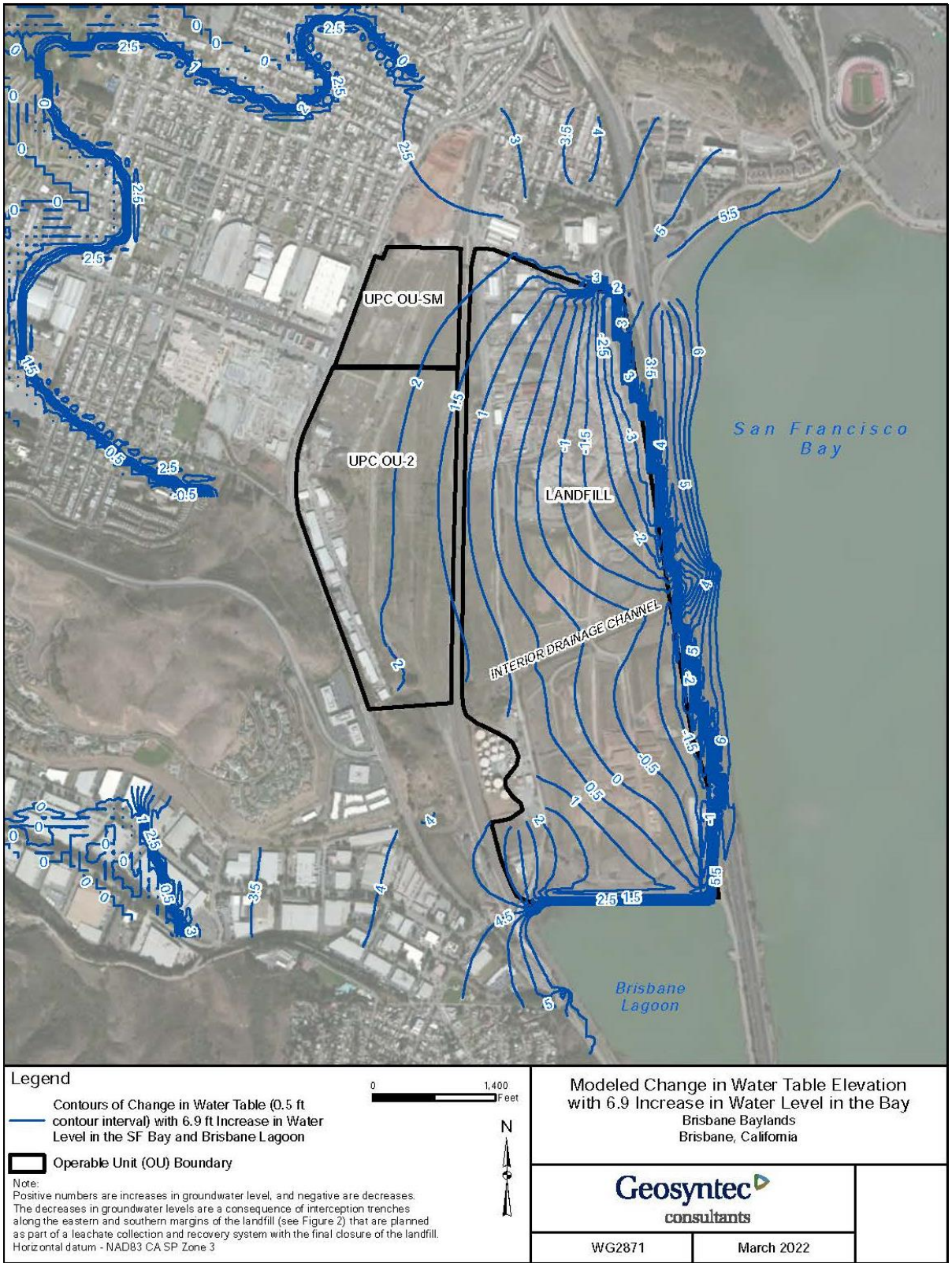
A significant impact would nevertheless result because the Specific Plan's drainage system does not fully implement Program EIR Mitigation Measures 4.H-4a (requires compliance with NPDES Construction General Permit and City of Brisbane Municipal Regional Stormwater Permit) or 4.H-4b (requires compliance with RWQCB dewatering permit or Bayshore Sanitary District sanitary sewer discharge requirements).

Figure 4.14-6: Areas Susceptible to Groundwater with 6.6 Feet of Sea Level Rise



Source: ESRI, 2023; County of San Mateo, 2023; PlaceWorks, 2023; California Office of Environmental Health Hazard Assessment, 2021; USGS, 2020

Figure 4.14-7: Site-Specific Modeling of Groundwater Level Changes



Program EIR Mitigation Measures

MM HWQ-3a: Known Drainage Deficiencies (Program EIR Mitigation Measure 4.H-4a). Prior to issuance of a building permit, all site-specific development plans within the Baylands shall include systemwide drainage improvements that shall accommodate all increased runoff and correct the Project's incremental, additional impact to flood risks to areas with existing deficiencies (e.g., Levinson Overflow Area and the PG&E property):

- On-site storm drainage collection facilities shall be sized to convey the peak flow rate from a 25-year storm event entirely within the piping system such that Baylands roadways and recreational facilities are not flooded.
- Drainage improvements shall accommodate the 100-year peak storm event within the piping system and within streets such that building finished floor elevations provide a minimum of 1 foot of freeboard above the 100-year storm event hydraulic grade line water elevation with tidal flow and Year 2100 projected sea level rise.
- Key roadways including Sierra Point Parkway, Lagoon Road, and Tunnel Avenue shall be designed such that these roadways are available as evacuation routes in the event of a 100-year storm event.

The proposed system design shall be submitted to the City Engineer for approval and shall hydraulically isolate existing drainage inlets fronting the Levinson Overflow Area and the PG&E property from the existing Brick Arch Sewer system.

MM HWQ-3b: Bayshore Boulevard Drainage (Program EIR Mitigation Measure 4.H-4b). Prior to issuance of a building permit, all site-specific development plans within the Baylands shall include additional conveyance capacity by incorporating new storm drain facilities along Bayshore Boulevard north of Industrial Avenue. Development plans shall also require addition of a new inlet near the Bayshore Boulevard and Industrial Way intersection that is large enough to intercept surface flows from Levinson Overflow Area and the PG&E property in accordance with and as approved by the City. Review and approval by the City Engineer shall be required to confirm that conveyance capacity is sufficient to accommodate the 100-year peak storm event within the piping system and streets such that building finished floor elevations provide a minimum of 1 foot of freeboard above the 100-year storm event hydraulic grade line water elevation with tidal flow and Year 2100 projected sea level rise.

Significance Conclusion for HWQ-3 with Implementation of Program EIR Mitigation Measures

Mitigation Measures MM HWQ-3a and HWQ-3b would require all areas within the Baylands, including streets adjacent to existing use areas, to accommodate the increased runoff caused by Baylands development such that:

- Baylands roadways and recreational facilities are not flooded in a 25-year storm event;
- Lowest finished floors of buildings for human occupancy are not flooded in a 100-year storm event; and
- Sierra Point Parkway, Lagoon Road, Geneva Avenue, and Tunnel Avenue would be able to provide access for emergency response and serve as evacuation routes during a 100-year storm event.

However, the new unfinished basement parking areas proposed by the Project along Frontage Road would still be subject to flooding, which would cause damage to vehicles within such garages and preclude emergency response access to all portions of development sites along Frontage Road.

Thus, a significant impact would remain with implementation of Program EIR mitigation measures.

Additional Mitigation Measures

MM HWQ-3c: Drainage and Flood Protection along Frontage Road. Drainage along Frontage Road shall be designed to:

- Avoid flooding of parked vehicles consistent with National Flood Insurance Program Technical Bulletin 6, *Requirements for Dry Flood-Proofed Below-Grade Parking Areas under Non-Residential and Mixed-Use Buildings* (FEMA 2021).
- Provide emergency response access to all portions of development sites along Frontage Road.

Significance Conclusion for Impact HWQ-3 with Implementation of All Mitigation Measures

Mitigation Measures MM HWQ-3a through MM HWQ-3c would ensure adequate response access to all portions of development sites along Frontage Road, including basement parking areas, and would also ensure that Baylands development would not increase flooding frequency, duration, or depth of a 100-year storm on adjacent lands even with anticipated SLR

of 6.5 feet through the Year 2100. Thus, impacts are less than significant with all mitigation incorporated.

d. Impact HWQ-4: Release of Pollutants Due to Flood and Tidal Action, Sea Level Rise-Induced Changes to Groundwater, Tsunami, or Seiche

Methodology for Determining Significance

Stormwater flows would come into contact with common urban pollutants such as petroleum hydrocarbons (i.e., fuel and motor oil), lubricants (i.e., grease and oil), sediment, and metals (generated by the wear of automobile parts), as well as herbicides and pesticides used within landscaped areas, and flows could transport sediment and other pollutants into the Bay and lagoon. Analysis was undertaken for Impact HWQ-1 to determine the extent to which stormwater flows, landscape irrigation, and other activities would transport urban pollutants into receiving waters. The analysis below focuses on the extent to which flood events, sea level-rise induced changes to groundwater levels, tsunamis, and seiches could increase the transport pollutants into the Bay and lagoon.

While sea level rise is generally addressed in relation to tidal or permanent inundation, sea level rise is also associated with rising groundwater elevations raising the water table. In some cases, sea level rise can result in raising groundwater high enough that it can emerge on the surface in low-lying areas and cause flooding, an effect known as "emergent groundwater." This slow but chronic threat can flood communities from below, damaging buried infrastructure, flooding below-grade structures, mobilizing pollutants, compromising foundations, and emerging above ground as an urban flood hazard.

Although Baylands development would not cause emergent groundwater, analysis has been undertaken to determine whether the Specific Plan would place new development in locations where emergent groundwater would result in the release of pollutants into the environment. Such analysis included review of various sources, including vulnerability mapping prepared by San Mateo County based on USGS, California of Environmental Health Hazard Assessment, and BCDC.

As stated above, the Specific Plan area does not include any areas that are at risk of flooding from a tsunami. Thus, there would be no potential for a tsunami to cause the release of pollutants as a result of Specific Plan development.

Inundation from a seiche can occur if the wave containment walls, such as the wall of a reservoir, water storage tank, dam, or other artificial body of water are overtopped or damaged. The Specific Plan proposes construction of a water storage tank and fuel storage tanks that

could be subject to seiche as the result of an earthquake. A significant impact would occur if above-ground water storage tanks were constructed in a manner that:

- A storage tank wall would be damaged from a seiche created within the storage tank by an earthquake; and
- Water or fuel released from a storage tank would cause the release of pollutants into the environment.

Impact Assessment

Release of On-Site Pollutants into the Environment Due to Flooding

As stated above in the analysis of Impact HWQ-1, nonpoint source pollutants would be washed by rainwater from rooftops, landscaped areas, and roadways into receiving waters via on-site drainage facilities. The volume of rain falling on new impervious surfaces would result in an increase in volume and velocity of flows and would wash additional urban pollutants from rooftops, roadways, parking lots, and landscaped areas into receiving waters relative to existing conditions.

Sea Level Rise and Groundwater

As previously discussed, groundwater levels and the water table will rise as a consequence of sea level rise, with the rise limited to 2 feet or less in the Specific Plan area due to the leachate collection system that will be installed as part of final landfill closure prior to site development. Because most of the western portion of the Baylands would be raised by proposed site grading by 8 to 12 feet, Specific Plan development would not be subject to flooding due to emergent groundwater. Without the occurrence of emergent groundwater, this mechanism would not release pollutants.

In addition, the direction of groundwater flow across the Baylands area is toward the leachate collection and recovery system to be installed for the landfill (see Section 4.13, *Hazards and Hazardous Materials*, for further discussion). The Remedial Action Plans for Baylands area (i.e., Operable Units OU-SM and OU-2) will require the construction of a cap over buried contaminated materials to prevent exposure of people and the environment to those contaminated materials. Contaminated groundwater in the area of the Baylands will flow to the leachate collection and recovery system for treatment, thus preventing the exposure of people and the environment to pollutants in groundwater.

Tsunami

Because the Specific Plan area is not located within a tsunami hazard zone, there would be no impact related to release of pollutants into the environment as the result of damage caused to the on-site water storage tank by a tsunami.

Seiche

Above-Ground Tanks

Water storage tanks would comply with California Code of Regulations, Title 16, Section 64585, which sets design standards for above ground water distribution reservoirs and incorporates American Waterworks Association design standards. Thus, Baylands water storage tanks would be constructed to withstand seiches. In addition, above-ground fuel tanks at fire stations would comply with the design standards of California Health and Safety Code Sections 24000–26275. Thus, it is not likely that a water storage or above-ground fuel storage tank or containment wall would be damaged in an earthquake such that its contents would spill into the environment.

San Francisco Bay

San Francisco Bay is partially enclosed, with outlets to San Pablo Bay, as well as to the Pacific Ocean via the Golden Gate, and is relatively shallow, with a mean depth of approximately 27.6 feet.[334] While small-scale seiches are commonly observed in California lakes, ponds, swimming pools, and bathtubs during earthquakes, the California Geological Survey reported in April 2006 that "a strong earthquake in northern California could trigger a large seiche in San Francisco Bay or Lake Tahoe with considerable damaging effects."[335] However, geologic-induced seiche events have not been documented in San Francisco Bay, and meteorologic effects are quickly dissipated due to the connection with the Pacific Ocean.[336]

Significance Conclusion for Impact HWQ-4

The Specific Plan requires stormwater runoff to be treated prior to discharge to wetlands, Visitacion Creek, Brisbane Lagoon or San Francisco Bay in compliance with Municipal Regional Stormwater NPDES Permit (MRP) Order No. R2-2022-018, NPDES Permit No. CAS612008 adopted by the RWQCB-San Francisco Bay Region in May 2022. Appropriate source control, site design, and stormwater treatment measures that would be implemented are identified in:

- The San Mateo Countywide Water Pollution Prevention Program C.3 Regulated Project Guide, which describes stormwater treatment options, techniques, design, and maintenance requirements.

[334] U.S. Geological Survey. *San Francisco Bay Bathymetry 2007.* https://www.usgs.gov/centers/pcmsc/science/san-francisco-bay-bathymetry. Accessed November 19, 2024.

[335] California Geological Survey, *California Geology April 2006, Earthquakes of the San Francisco Bay Are and Northern California*, https://www.conservation.ca.gov/cgs/Documents/Publications/Special-Publications/SP_125.pdf. Accessed November 19, 2024.

[336] City and County of San Francisco. *Treasure Island and Yerba Buena Island Redevelopment Project Draft EIR*. July 12, 2010.

- The Green Infrastructure Design Guide, which is a comprehensive design guide for the design, construction, and maintenance of green infrastructure, including sustainable stormwater design (SMCWPP 2020a).[337]

In addition:

- The operation of the leachate collection and recovery system to be installed as part of final landfill closure prior to Specific Plan development would maintain groundwater flow toward San Francisco Bay and would capture and treat contaminated groundwater, if any.
- Project water storage and above-ground fuel storage tank facilities would be constructed to withstand an earthquake and not rupture. Above-ground fuel tanks to be constructed at fire stations would be provided with containment such that a leak would not be carried into streets, storm drain systems, Visitacion Creek, or the Brisbane Lagoon.
- The Specific Plan area is not located within a tsunami hazard zone.
- Geologic-induced seiche events have not been documented in San Francisco Bay, and meteorologic effects are quickly dissipated due to the connection with the Pacific Ocean.

Impact HWQ-4 would therefore be less than significant.

4.14.7 REFERENCES – HYDROLOGY AND WATER QUALITY

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[337] These guides can be found can be found at www.flowstobay.org.

C/CAG (City/County Association of Governments). 2024. *About the Flows to Bay Program*. Accessed August 7, 2024. https://www.flowstobay.org/about/who-we-are/about-the-flows-to-bay-program/.

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4.15 GEOLOGY, SOILS, AND SEISMICITY

4.15.1 INTRODUCTION

a. Overview

This section describes environmental conditions and regulatory setting; evaluates the physical environmental effects of the 2025 Specific Plan project related to geology, soils, and seismicity, including hazards such as fault rupture and earthquakes, seismic-related ground failure (e.g., liquefaction), landslides and slope stability, lateral spreading, subsidence, expansive soils, and soil corrosivity; and identifies mitigation measures needed to address significant impacts. This section also addresses the existing conditions and potential for impacts associated with vertebrate and invertebrate fossils and unique geologic units.

The effects of erosion on water quality are addressed in Section 4.14, *Hydrology and Water Quality*.

b. Definitions

Corrosive soils contain chemical constituents that can react with construction materials, such as concrete and ferrous metals, to damage foundations and buried pipelines, potentially leading to metals in pipes to leach into ground and surface waters and cause leaks in plumbing.

Design Earthquake, Design Ground Motion is used as the basis for the structural design of buildings to meet to provide an acceptable level of risk in terms of both public safety and economic impact during the operating life of the structure and its intended use. Determination of design earthquake and resulting design ground motions to ensure earthquake safety are estimated on a site-specific basis per California Building Code Chapter 16A, *Structural Design*.[338] Thus, the design earthquake, design ground motion, and resulting structural design standards for structures that must remain operational following a major earthquake (e.g., fire and police stations, hospitals) would be more stringent than other uses (e.g., warehouses) and more stringent for high as compared to low occupancy uses (e.g., multi-story v. single story structures).

Earthquake is the result of a sudden release of energy in the earth's crust that creates seismic waves. Earthquakes are classified by their magnitude, which is a measure of the amount of energy released during an event. The seismicity or seismic activity of an area refers to the frequency, type, and size of earthquakes experienced over time.

[338] California Building Code (CBC), Chapter 16A, *Structural Design* contains California amendments based on the American Society of Civil Engineers (ASCE) Minimum Design Standard ASCE/SEI 7-16, *Minimum Design Loads for Buildings and Other Structures*. Chapter 16A provides requirements for general structural design and includes means for determining earthquake loads as well as other loads (such as wind loads).

Erosion refers to the loosening and transportation of rock and soil debris by wind, rain, or running water.

Expansive soils are soils containing water-absorbing minerals that expand or contract when they absorb or lose water. Expansive soils can damage buildings due to the force they exert on foundations as they expand.

Factor of safety is a geotechnical criterion that refers to the ratio of forces resisting movement of a slope to those causing movement. It is used in quantitative slope stability modeling to determine the stability of manufactured slopes. Expressed as a numeric figure, the factor of safety represents a comparison of shearing forces (e.g., gravitational forces and internal pressures causing movement) versus resisting forces of the soil or bedrock. Therefore, the higher the factor of safety, the more stable the slope because the factor of safety represents a determination of greater resisting forces present. When a calculated factor of safety is less than 1.0, forces that make a slope susceptible to failure exceed those that tend to hold it in place Generally accepted geotechnical practices for the San Francisco Bay Area regard a slope safety factor of 1.5 as suitable for development under static or non-earthquake conditions. For pseudo-static or earthquake conditions, a lower safety factor is typically used because a higher factor cannot be practically achieved. Therefore, a safety factor of 1.2 for pseudo-static conditions is a generally accepted practice.

Fault refers to a fracture in the earth's crust forming a boundary between rock masses that have shifted.

Fault, active is defined by the California Geologic Survey as one that has had surface displacement within Holocene time (about the last 11,700 years).

Fault, inactive is defined by the California Geologic Survey as one that has not had surface displacement since before the Quaternary period (more than 1,800,000 years ago).

Fault, potentially active is defined by the California Geologic Survey as one that has had surface displacement within Quaternary time (the last 1,800,000 years).

Fill refers to earth or any other substance or material, including pilings placed for the purposes of erecting structures thereon.

Fill material refers to any material placed in an area to increase surface elevation.

Ground failure includes mudslides, landslides, liquefaction, or the compaction of soils due to ground shaking from an earthquake.

Ground lurching is a consequence of earthquakes involving the horizontal movement of deposits, soil, sediments, or fills found on vertical embankments that create irregular ground cracks.

Landslide denotes the down-slope movement of soil and rock under the direct influence of gravity. The term "landslide" encompasses five modes of slope movement: falls, topples, slides, spreads, and flows. These are further subdivided by the type of geologic material (bedrock, debris, or earth). Debris flows (commonly referred to as mudflows or mudslides) and rock falls are examples of common landslide types.

Lateral spreading is a ground failure condition induced by liquefaction that causes soil to move toward a free face (e.g., a slope along a creek) or down a gentle slope, due to the pore-pressure build-up during liquefaction of an underlying saturated material. Lateral spreading often occurs along riverbanks and shorelines where loose, saturated sandy soil is commonly encountered at shallow depths.

Liquefaction is the phenomenon in which saturated granular soils temporarily lose their shear strength during periods of earthquake-induced strong ground shaking. The susceptibility of a site to liquefaction is a function of depth to density, water content of granular sediments, and the magnitude and frequency of earthquakes in the surrounding region. Saturated, unconsolidated silt, sand, and silty sand within 50 feet of the ground surface are most susceptible to liquefaction. Liquefaction-related phenomena may include lateral spreading,[339] ground oscillation, loss of load bearing strength, subsidence, and buoyancy effects.

Moment magnitude scale is based on the total energy release of the earthquake. Moment magnitude (M_W) is a product of the distance a fault moved and the force required to move it and is derived from modeling recordings of the earthquake at multiple stations. Moment magnitude has become the standard scale used by seismological authorities such as the United States Geological Survey (USGS) for reporting large earthquakes (typically M > 4.0), replacing the local magnitude (Richter, M_L) scale, which continues to be used for smaller earthquakes (typically M <4.0).

Paleontological resources refer to any fossilized remains, traces, or imprints of organisms older than recorded history and/or more than 5,000 years old that are preserved in or on the Earth's crust and provide information about the history of life on Earth.

Seismic Design Category refers to broad classes of common soil conditions used by the California Building Code to assign ground motion attenuation and amplification effects. Seismic Design Categories are determined based on the average properties of the soil within 100 feet (30 meters) of the ground surface of a proposed structure. Seismic Design Categories are an indicator of how much attention must be paid to the seismic design and construction of a building. Ranging from "A" to "F," buildings within Category "A" must be designed for seismic forces, but do not require any special seismic attention. Buildings in Category "F" require substantial seismic care and attention. Three parameters determine Seismic Design Categories:

[339] Lateral spreading occurs when liquefaction on gentle slopes causes subsurface soil layers to move downslope.

- The geographic location parameter addresses relative seismicity.
- The second parameter, underlying soils, addresses the extent to which soils underlying a building site dampen or amplify seismic forces.
- The third parameter in determining seismic design is the intended use of a specific building. Seismic Design Categories define two types of buildings:
    - Typical structures (e.g., offices, residential buildings), and
    - Those that must be functional after a seismic event (e.g., hospitals, fire stations).

Soil Class refers to the six Seismic Design Categories rating the extent to which soils underlying a building site dampen or amplify seismic forces per California Building Code Section 1613.2.2 and 1613A.2. An "A" soil is one which consists of hard rock, which is advantageous to seismic design. "E" and "F" class soils are soft and tend to amplify seismic forces.

Site Classification	General Description
A	Hard Rock
B	Rock
C	Very Dense Soil and Soft Rock
D	Stiff Soil
E	Soft Clay Soil
F	Unstable Soils

Unique geologic feature refers to a feature that:

- Is the best example of its kind locally or regionally;
- Embodies the distinctive characteristics of a geologic principle that is exclusive locally or regionally;
- Provides a key piece of geologic information important in the area's geology or geologic history;
- Is a geologic formation that exclusively occurs locally or regionally;
- Contains a mineral that is not known to occur elsewhere in the Bay Area; or
- Is used repeatedly as a teaching tool.

4.15.2 ENVIRONMENTAL SETTING

a. Baseline

Although spring 2023 is generally the period used to describe existing conditions in relation to other resource chapters, completion of site remediation and final landfill closure is used as the baseline for analysis of geology, soils, and seismicity impacts for the following reasons:

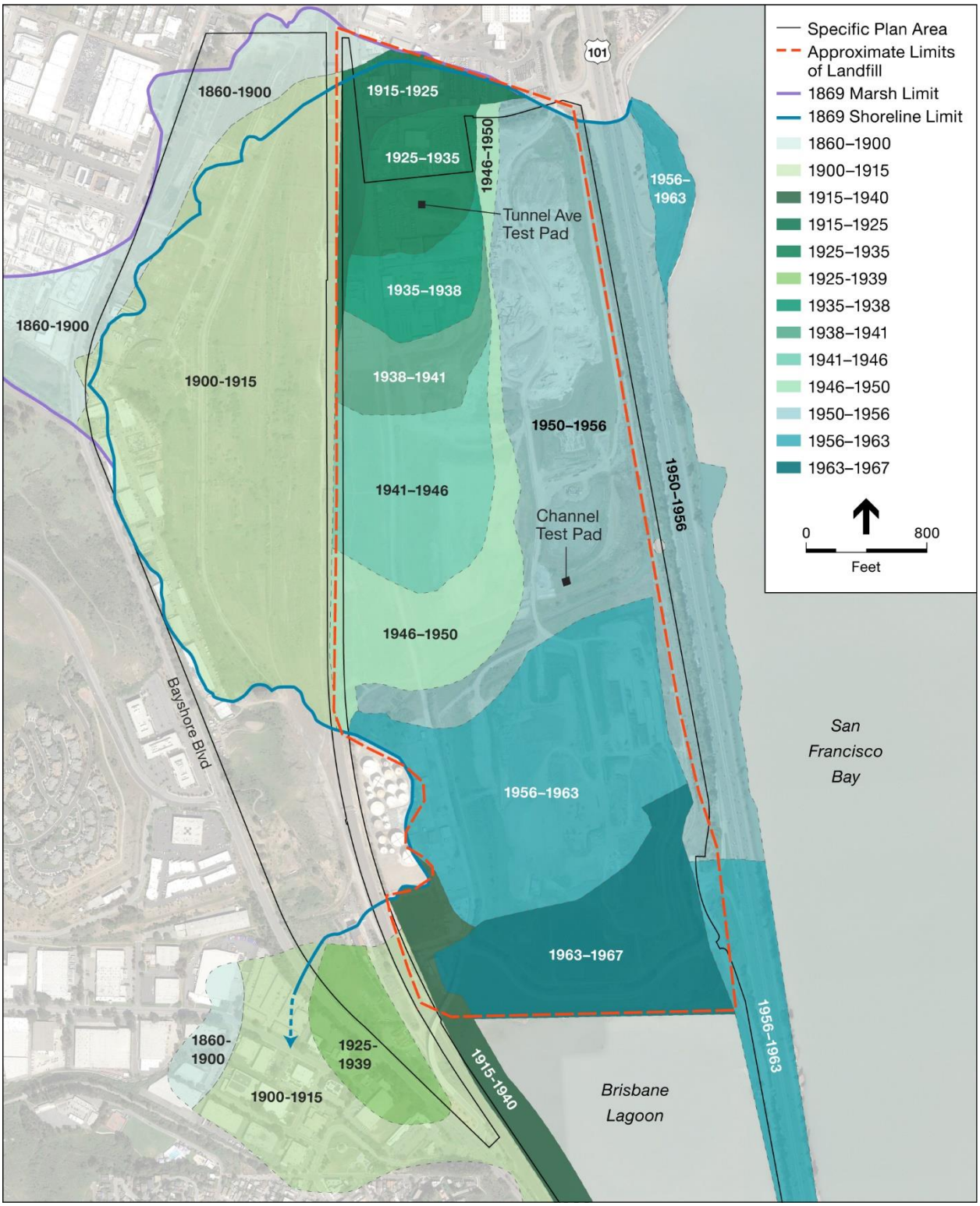
- Feasibility Studies/Remedial Action Plans (Geosyntec Consultants 2021a, 2021b) have undergone environmental review and been approved by the appropriate state regulatory agencies (Department of Toxic Substances Control: Regional Water Quality Control Board) for the western portion of the Baylands.
- A Final Landfill Closure Plan (Engeo 2023) has undergone environmental review and been approved by the Regional Water Quality Control Board and San Mateo County Environmental Health Services.
- Brisbane General Plan policy requires site remediation and landfill closure to be undertaken pursuant to the regulatory oversight of state and regional agencies prior to development permitted by the Specific Plan (see Section 4.15.3, Regulatory Context for Baylands Development, City of Brisbane General Plan, Policy 175, and Baylands Specific Plan, Infrastructure).

Site remediation and landfill closure activities subject to the regulatory oversight of state and county regulatory agencies that have received environmental review and been approved by those agencies are not part of the Specific Plan project and are not analyzed in this EIR. However, because site grading that would be subject to issuance of a City grading permit to move soil from the eastern to the western portion of the Baylands would create building pads for Specific Plan development, the physical environmental effects of such grading, as well as soils, geology, and seismicity impacts associated with Specific Plan development following site remediation and landfill closure, are addressed in this EIR.

b. Landform History of the Baylands

Figure 4.15-1 shows the historical San Francisco Bay shoreline, as well as the evolution of fill within the Baylands, forming both the former Southern Pacific Railroad railyard in the western portion of the site and the former Brisbane Landfill in the eastern portion of the Baylands.

Figure 4.15-1: Baylands Historic Fill



Source: City of Brisbane, Final Brisbane Baylands Program EIR, August 2018. ENGEO, Final Landfill Closure Geotechnical Report, May 19, 2022.

As shown in **Figure 4.15-1**, except for Icehouse Hill, the terrestrial portions of the Baylands are located on fill that was placed over Bay Mud in the past. Filling of the Bay leading to creation of the Baylands began in the late 1800s. In 1904, the Southern Pacific Railroad began construction of a new level route south from San Francisco that more closely followed the Bay's shoreline. By 1914, the Southern Pacific Railroad railyard was installed, and by 1935, the entire portion of the Baylands west of the railroad tracks had been filled with rubble from the 1906 earthquake, debris, soil, and local bedrock rubble excavated during construction of tunnels and roads in the area.

Starting the early 1930s, San Francisco began the gradually filling in San Francisco Bay east of the railroad tracks by placing solid waste into the Bay, creating the "Brisbane Landfill" and forming the eastern portion of the Baylands. The former Brisbane Landfill was filled in three areas:

- A portion that extended eastward about 1,000 feet into San Francisco Bay from near the Southern Pacific Railroad tracks was used for waste placement from 1932 until 1952. In 1948, construction of US Highway 101 east of the landfill set the eastern boundary for the landfill, which was then isolated from the direct wave action of San Francisco Bay.
- From 1953 to 1958, the landfill was extended eastward into San Francisco Bay and southward into what became the Brisbane Lagoon following freeway construction.

An additional landfill area was created in 1959 when the landfill was extended farther south and used for waste placement until the landfill stopped receiving waste in 1967.

c. Regional and Site Geology

The Baylands lies along the western margin of San Francisco Bay. The northwesterly trend of ridges and valleys characteristic of California's Coast Ranges is apparent in San Bruno Mountain and the hills west of the Specific Plan area. San Francisco Bay lies within a dropped-down crustal block bounded by the East Bay Hills and the Santa Cruz Mountains. The San Francisco Bay depression resulted from interaction between the major faults of the San Andreas Fault zone, particularly the Hayward and San Andreas faults located east and west of the Bay, respectively (see Appendices M.1, M.2).

Below its human-made fill, the majority of the Specific Plan area is underlain at depth by Jurassic- to Cretaceous-aged bedrock of the Franciscan complex, consisting of highly deformed and fractured sedimentary rocks. Quaternary sediments deposited on eroded Franciscan bedrock underlie the low-lying areas in the Baylands vicinity. Sediment deposition within the pre-historic Bay margin has been influenced by oscillating late-Quaternary sea levels that resulted from the advance and retreat of glaciers worldwide. The resulting sequence of alternating estuarine and terrestrial sediments correspond to high and low sea-level stands, respectively. Quaternary sediments in the plains landward of the Bay are predominantly terrestrial (see Appendices M.1, M.2).

By late Pleistocene time (approximately 125,000 years ago), the high sea level resulted in deposition of "Yerba Buena Mud," also known locally as "Old Bay Clay." Yerba Buena Mud was deposited in an estuarine environment similar in character and extent to the present Bay. Sea-level lowering associated with the onset of glaciation exposed the Bay floor and resulted in terrestrial sedimentation, such as the Colma Formation, on top of the Old Bay Clay. Sea levels rose again starting roughly 20,000 years ago, fed by the melting of glaciers. The sea re-entered the Golden Gate about 10,000 years ago (Atwater 1979, as cited in Appendix M.1). Inundation of the present Bay resulted in deposition of estuarine sediments, called Young Bay Mud, which continues to accumulate regionally.

Historical development of the San Francisco Bay shoreline within the Baylands and elsewhere resulted in placement of artificial fill material over substantial portions of modern estuaries, marshlands, tributaries, and creek beds in an effort to reclaim land (Nichols and Wright 1971, as cited in Appendix M.1).

d. Topography

Topography varies across the Specific Plan area, with Icehouse Hill the highest point on the site (approximately 190 feet above mean sea level [AMSL]) and Visitacion Creek the lowest. West of the Caltrain right-of-way, grades are generally flat, with most of the area draining toward a central drainage channel running parallel to and east of the Industrial Way. Areas near the Roundhouse and Industrial Way drain toward an existing low point elevation of approximately 9 feet AMSL near the intersection of Bayshore Boulevard and Industrial Way (BKF 2022).

Topography within the eastern portion of the Baylands is largely formed by the former Brisbane Landfill and subsequent use of the area as a soil recycling operation, both receiving and selling fill soil. The soil recycling operation created many piles of soil for which topography frequently changed as quantities of soil materials were imported and exported. Separating the piles of earthen materials were flat areas serving as access for trucks moving dirt to and from the site. Visitation Creek, which overlies waste materials from the former landfill, divides the Specific Plan area perpendicular to US Highway 101 into north and south areas and collects runoff from the majority of the Baylands. The northeastern-most portions of the Baylands drain toward Beatty Avenue, while the southern-most areas grade toward the Brisbane Lagoon. Elevations within the eastern portion of the Baylands range from approximately -3 feet AMSL at the existing drainage channel bottom adjacent to the US Highway 101 box culvert to approximately 80 feet AMSL atop the highest dirt mound (BKF 2022).

e. Subsurface Conditions

Soils

Figure 4.15-2 shows the extent of artificial fill within and adjacent to the Baylands. Within the western portion of the Baylands, the upper layer of soil is artificial fill placed to create the Southern Pacific Railroad rail line and maintenance yard between 1904 and 1914. The upper soil layers within the eastern portion of the Baylands consist of soil stockpiled during soil recycling operations atop municipal wastes within the former Brisbane Landfill. Below the artificial fill west of the Caltrain right-of-way and below waste layers to the east, subsurface layers are, from youngest to oldest (shallowest to deepest) (see Appendices M.1, M.2):

- Holocene Bay Deposits consisting of Young Bay Mud and marine sand;
- Pleistocene aeolian, alluvial, and marine deposits; and
- Franciscan bedrock.

Area West of Caltrain Right-of-Way

Within the western portion of the Baylands, artificial fill placed for construction of the Southern Pacific Railroad rail line and maintenance yard is highly variable, with different portions consisting of brown or olive gray gravel, sand, clay, and silt that varies from loose to dense or medium stiff to stiff. Rock fragments, organic matter, and human-made debris were encountered in many of the borings within this portion of the Baylands. Records regarding the placement and compaction of this material are not available; however, the variable density of soil sampled from borings indicates that the fill is likely non-engineered. The artificial fill generally ranges from 6 to 12 feet in thickness, with some localized areas having deeper fill extending up to 22 feet deep (see Appendix M.2).

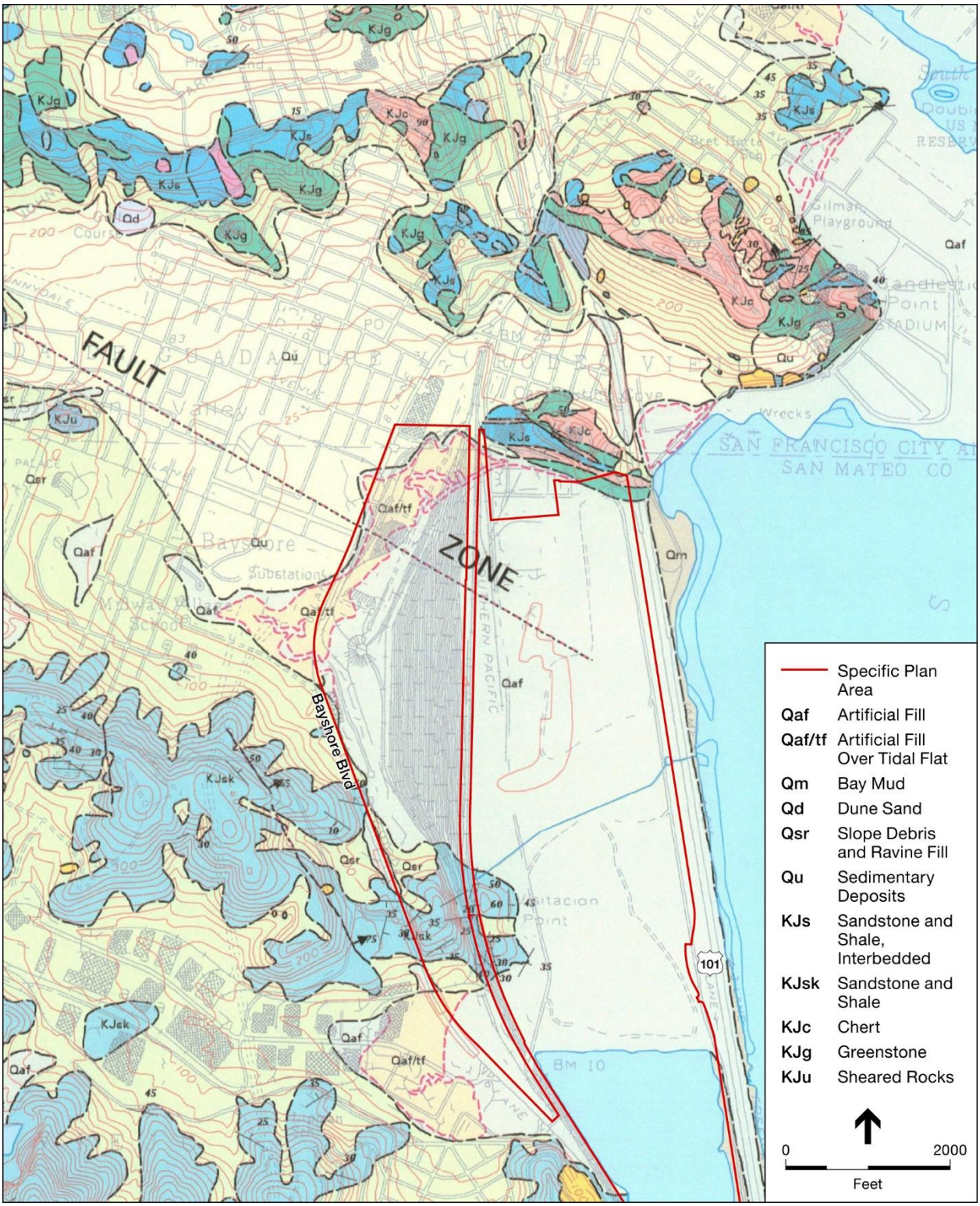
Artificial Fill and Soil Stockpile (Non-Engineered Fill)

Area East of Caltrain Right-of-Way

Within the eastern portion of the Baylands, the upper soil layer consists of soil stockpiled from the soil recycling operation. This layer is highly variable and ranges from sandy clay to gravel with sand, with the majority of fill consisting of silty clayey sand. These materials range from loose to very dense with variable amounts of debris consisting of concrete, bricks, tires, steel, and wood. Because soils imported to the site were intended for sale, they were placed as non-engineered fill.

The thickness of the fill is highly variable across the former landfill site, with elevations ranging from 15 to 70 feet AMSL primarily due to differing fill thickness. In general, the fill on the northern portion of the former landfill, where the site elevation is lower, is relatively thin, ranging in thickness from 3 to 5 feet. Fill within the southern portion of the former landfill ranges up to 40 feet thick or more (see Appendix M.2).

Figure 4.15-2: Regional Geologic Map



Waste within the Former Brisbane Landfill

The former Brisbane Landfill operated prior to current requirements for providing landfill liners, daily cover, and other measures to protect groundwater quality and adjacent soils. Over time, approximately 12.5 million cubic yards of waste were disposed of at the former landfill. Of this volume, an estimated 73 percent was produced by residential and commercial activities, with inert fill accounting for approximately 25 percent and the remaining 2 percent assumed to be liquid waste (ENGEO 2023).

Based on the Waste Discharge Requirements from the California Regional Water Quality Control Board (RWQCB) in effect at the time, the landfill was used for the disposal of primarily non-hazardous solid wastes composed of domestic, industrial, and shipyard waste, sewage, and rubble. Waste materials include wood, paper, plastic, glass, wires, tires, metals, and gravelly soil. The thickness of waste deposits ranges from 15 to 35 feet, with the majority ranging between 25 and 30 feet (ENGEO 2023).

Holocene Bay Deposits

The Holocene Bay Deposits underlying artificial fill and waste deposits within the Baylands include intermixed soft to medium stiff clay, silt, loose to medium dense sand, and organic material deposited by intertidal activity. These deposits occur between 2 feet AMSL and 48 feet below mean sea level and include zones of highly compressible clay, locally known as Young Bay Mud. The thickness of the Young Bay Mud generally increases moving west to east, with thicknesses ranging from less than 5 feet along Bayshore Boulevard to up to 60 feet near US Highway 101. There are two troughs of deeper Young Bay Mud leading to the former drainage outlets of Visitacion Valley and Guadalupe Valley. In some areas of the Baylands, the Bay Deposits include a loose to medium dense sandy soil strata up to 10 feet thick underlying the Young Bay Mud.

When subjected to new loads from fill or structures greater than the material has previously experienced, the Young Bay Mud will undergo long-term settlement. Additionally, the sandy layers within the Bay Deposits may be susceptible to liquefaction during cyclic loading (see Appendix M.2).

Pleistocene Aeolian, Alluvial, and Marine Deposits

Below the Holocene Bay Deposits, Pleistocene sand and clay were deposited in aeolian, alluvial, and marine environments. The sand deposits range from greenish gray to orangish brown and are medium dense to dense. Clay deposits, locally known as Old Bay Clay, range from greenish gray to olive brown and generally increase in strength with depth from approximately 1,100 to 3,500 per square foot. Old Bay Clay generally has similar consolidation properties as Young Bay Mud; however, it is only susceptible to settlement from higher loading conditions since it is over-consolidated (BKF 2022).

Jurassic- and Cretaceous-Age Franciscan Bedrock

The Pleistocene deposits are underlain by Jurassic- and Cretaceous-age Franciscan bedrock that is generally composed of interbedded mélange matrix and siltstone/sandstone. Published bedrock maps show that bedrock elevation ranges from mean sea level to -250 feet below mean sea level across the Baylands, with the shallower bedrock located at the northern and southwestern extents of the site and the deepest bedrock in the middle. The Franciscan bedrock typical of the area is friable to strong and severely weathered, consisting of greenstone, serpentinite, siltstone, and greywacke sandstone (see Appendices M.1, M.2).

Existing Groundwater Conditions

Existing groundwater conditions vary throughout the Baylands, and shallow and deep aquifers are present. Within the western portion of the Baylands, a shallow groundwater table of between approximately 6 and 15.5 feet AMSL was observed in monitoring wells during monitoring in 2019 and 2020. For construction purposes, Baylands geotechnical analyses indicate that groundwater should be expected to be encountered as shallow as 1 foot below the existing ground surface. (see Appendix M.1)

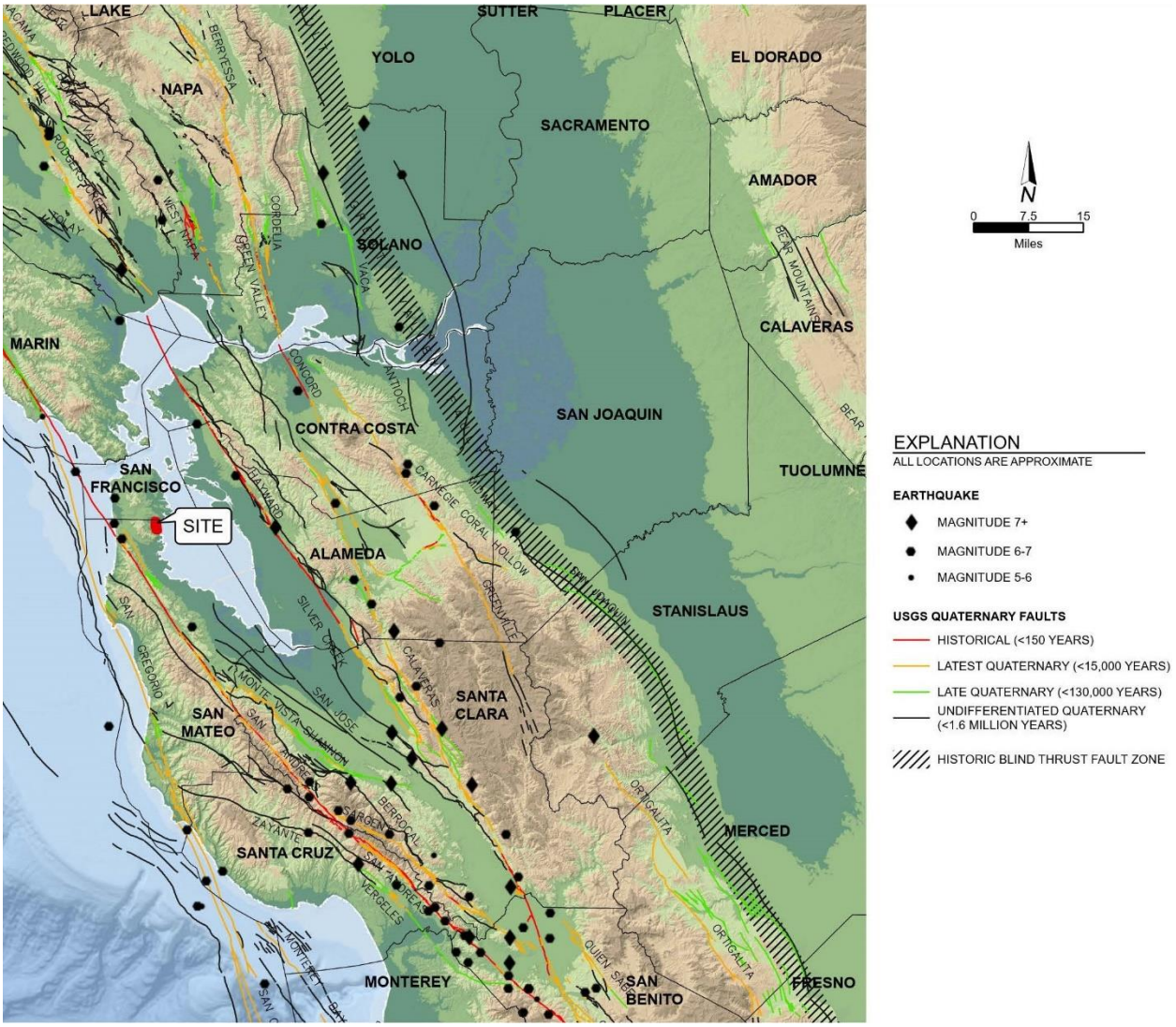
During monitoring east of the Caltrain rail line, groundwater elevations were approximately 10 and 12.5 feet AMSL in the northern and southern portions, respectively. Groundwater near the existing internal drainage channel and the edge of the Brisbane Lagoon is at approximately 3 to 4 feet AMSL and generally between 4 and 10.5 feet AMSL around the exterior of the former landfill. Fluctuations in the level of groundwater may occur due to variations in tidal fluctuations from San Francisco Bay, earthwork activities, rainfall, irrigation practice, and other factors (BKF 2022). For design and geotechnical evaluation, the geotechnical analysis prepared for the eastern portion of the Baylands recommends using a groundwater table of 10 feet AMSL.

f. Seismicity

The San Francisco Bay Area region is seismically active, as evidenced by the presence of multiple active faults. Numerous small earthquakes occur every year in the region, and large (greater than moment magnitude [M_W] 7.0) earthquakes have been recorded and can be expected to occur in the future. **Figure 4.15-3** shows the approximate location of active and potentially active faults and significant historic earthquake epicenters mapped within the Bay Area region.

To determine nearby active faults that are capable of generating strong seismic ground shaking within the Specific Plan area, geotechnical studies prepared for the Baylands used the United States Geological Survey (USGS) Unified Hazard Tool, with the resulting faults listed below in **Table 4.15-1**. The locations of the faults are also presented in **Figure 4.15-3** (see Appendices M.1, M.2).

Figure 4.15-3: Regional Faulting And Seismicity



SOURCE: ENGEO, 2022.

Table 4.15-1: Nearby Active Faults

Fault Name	Distance from Specific Plan Area (Miles)	Maximum Moment Magnitude
San Andreas (Peninsula)	8.3	7.9
San Gregorio (North)	15.4	7.7
Hayward (North)	22.0	7.5

SOURCE: ENGEO, 2022a and 2022b. Based on USGS Unified Hazard Tool: Dynamic Conterminous U.S. 2014 (update) (v 4.2.0).

The 2015 Working Group on California Earthquake Probabilities, as cited in the Baylands geotechnical reports (see Appendices M.1, M.2), evaluated the 30-year probability of a Moment Magnitude 6.7 or greater earthquake occurring along known active fault systems in the Bay Area in the Third Uniform California Earthquake Rupture Forecast (UCERF3). UCERF3

estimated an overall probability of 72 percent for the Bay Area as a whole, and a probability of 6.4 percent for the Northern San Andreas Fault, which is the closest active fault to the site.

Based on the historical seismicity, the proximity of known active faults, and the estimated earthquake probabilities for the Bay Area as a whole, it is anticipated that the Baylands will experience strong seismic ground shaking during the lifetime of Specific Plan improvements.

g. Geologic and Geotechnical Hazards

Seismic Hazards

Potential seismic hazards resulting from a design earthquake include ground rupture (surface faulting), ground shaking, soil liquefaction, dynamic densification, earthquake-induced landslides, regional subsidence or uplift, and tsunamis and seiches. The potential effects of liquefaction include lateral spreading, settlement, loss of bearing capacity, down-drag on deep foundations, ground loss due to sand boil formation, and floatation of buried structures (see Appendices M.1, M.2). The 2022 California Building Code uses design criteria set forth in ASCE 7-16. Geotechnical studies prepared for the Baylands classified the area east of the Caltrain right-of-way as Seismic Design Category B. The area east of the right-of-way was identified as being Seismic Design Category F in accordance with ASCE 7-16, based on the area's liquefaction hazard. ASCE 7-16 requires that site response analysis be performed for Seismic Design Category F sites for design of structures and buildings (see Appendix M.1).

Ground Rupture

Ground surface displacement, or surface rupture, caused by an earthquake is a major consideration in the siting of buildings in areas that are traversed by active faults. Surface rupture occurs when movement on a fault deep within the earth breaks through to the surface.

Most surface faulting follows pre-existing faults, which are zones of weakness, and is confined to a relatively narrow zone several feet to tens of feet wide. Avoidance through implementation of building setbacks is the common method for avoiding fault rupture impacts.

A trace of the City College Fault Zone crosses the Baylands. This fault zone is considered not to have been active in the late Quaternary era and there is no seismicity associated with it; therefore, it is not considered active. The Specific Plan area is not located within a designated Alquist-Priolo Earthquake Fault Zone and there are no known surface expressions of active faults within the area; therefore, fault rupture through the Specific Plan area is not anticipated (see Appendices M.1, M.2).

Ground Shaking

An earthquake produces seismic waves that emanate in all directions from the fault rupture surface. The seismic waves cause ground shaking, which is typically strongest near the fault and attenuates as the waves move through the earth away from the fault. Based on the historic seismicity, the proximity of known active faults, and the estimated earthquake probabilities for the Bay Area as a whole, it should be expected that the Baylands will experience strong seismic ground shaking, as would most of the Bay Area, during the lifetime of buildings within the Specific Plan area (see Appendices M.1, M.2).

Liquefaction and Seismic-Related Ground Failure

Liquefaction

Soil liquefaction results from loss of strength during cyclic loading, such as that imposed by earthquakes. The soil considered the most susceptible to liquefaction is clean, loose, saturated, uniformly graded fine sand below the groundwater table. Empirical evidence indicates that loose fine-grained soil, including low plasticity silt and clay, is also potentially liquefiable. When seismic ground shaking occurs, the soil is subjected to cyclic shear stresses that can cause excess hydrostatic pressures to develop and liquefaction of susceptible soil to occur. If liquefaction occurs, and if the soil consolidates or vents to the surface during and following liquefaction, ground settlement and surface deformation may occur (see Appendix M.2).

Based on California Geologic Survey Seismic Hazard Zone Maps, the Specific Plan area is mapped as being in a seismic hazard zone with potential permanent ground displacements due to liquefaction. This liquefaction susceptibility mapping is based on regional geologic mapping of soil and rock deposits rather than on site-specific exploration or analyses (ENGEO 2022b). As part of the geotechnical studies for the Baylands, ENGEO assessed the seismic susceptibility and deformation potential based on material properties from laboratory testing and in-situ cone penetration test data. The results indicate that material within the artificial fill and the sandy deposits below the Young Bay Mud would be subject to liquefaction and cyclic densification during a design seismic event (see Appendices M.1, M.2).

Liquefaction-Induced Ground Settlement

Seismic-induced settlement may be generally subdivided into two categories: (1) settlement resulting from liquefaction of saturated soil, and (2) settlement resulting from dynamic densification of non-saturated soil. Based on cone penetration test data, Baylands geotechnical studies determined that liquefaction-induced settlement of generally between 2 to 3 inches may occur during a design seismic event. Some areas closest to the historic shoreline could, however, have settlement up to 4½ inches (see Appendices M.1, M.2).

Lateral Spreading

As discussed above, a likely continuous potentially liquefiable sand layer exists beneath the Young Bay Mud in the Specific Plan area. However, this layer varies from 40 to 90 feet deep, well below the bottom of the adjacent San Francisco Bay at the shoreline along the eastern border of the landfill. As such, the risk of liquefaction-induced lateral spreading was determined to be negligible (see Appendix M.1).

Ground Lurching

Ground lurching is a result of the rolling motion imparted to the ground surface during an earthquake. Such rolling motion can cause ground cracks to form in weaker soils. The potential for the formation of these cracks is considered greater at contacts between deep alluvium and bedrock. While such an occurrence is possible within the Specific Plan area, geotechnical studies for the Baylands conclude that the offset will be minor due to the site's location and underlying geology (see Appendices M.1, M.2).

Soils-Related Hazards

Compressible Soils

Young Bay Mud deposits are highly compressible and may be susceptible to significant settlement when subjected to additional loading. The approximate thickness of the Young Bay Mud deposits in the Specific Plan area is depicted on **Figure 4.15-4**.

Published maps and site explorations indicate that most of the western portion of the Baylands is underlain by soft, highly compressible Young Bay Mud deposits up to 50 feet thick, while Young Bay Mud within the eastern portion of the Baylands is 20 to 65 feet thick. Since the existing artificial fill within the western portion of the site was placed more than 50 years ago, the geotechnical study for that area assumes that settlement from previous infilling is essentially complete. However, future settlement of the compressible Young Bay Mud is anticipated when it is subjected to added loading, such as from placement of new fill to raise grades and/or planned structural loads of buildings and site improvements (see Appendix M.1). Placement of the waste within the eastern portion of the Baylands from 1932 to 1967 and the subsequent soil recycling operation subjected the Young Bay Mud to loading and settlement from primary consolidation. Future additional loading will induce continued settlement of this deposit.

Figure 4.15-4: Young Bay Mud Thickness

Expansive Soils

Expansive soils exhibit "shrink-swell" behavior, also called "linear extensibility." Shrink-swell is the cyclic change in soil volume (expansion and contraction) that occurs in fine-grained sediments from the process of wetting and drying. Typically, expansiveness is directly correlated to the amount of clay in the soil, with a high clay percentage resulting in a high expansion index (Edwards et al. 1970). The Young Bay Mud underlying the Baylands has a highly expansive nature (see Appendix M.1).

Soil Corrosivity

Corrosivity of soils is dependent on soil texture, soil pH, moisture content, and geochemical composition of fluids within the soil. These factors, in turn, are influenced by the physical and mineralogical composition of soils. Soil composition often is directly derived from the characteristics of the underlying geologic deposits on which it develops. Silty, loamy, and clayey soils tend to be among the more potentially corrosive soils, in contrast to granular soils (sands and gravels). In addition, the topography of the land, depth to groundwater, and native vegetation all influence the soil corrosivity potential.

As part of the geotechnical studies prepared for the Baylands, representative soil samples of artificial fill soils and Young Bay Mud were tested by a qualified analytical lab to determine soil pH, resistivity, and sulfate and chloride content. The Young Bay Mud underlying the Baylands was determined to be highly corrosive to metals due to high clay content and brackish bay water. Corrosive subsurface soils are especially likely along Bayshore Boulevard, where Bay Mud is present beneath the fill (see Appendix M.1).

Corrosive soils could have a detrimental effect on concrete and metals. Depending on the degree of corrosivity of subsurface soils at a specific location, concrete and reinforcing steel in concrete structures and bare-metal structures exposed to these soils could deteriorate, eventually leading to structural failures.

Landslide Hazards and Slope Stability

Slope failure can occur in the form of creep, slumps, large progressive translational or rotational failures, rockfall, or debris flow. These processes are defined as follows:

- Soil creep is the slow continuous deformation of soil or rock.
- Slumps refer to a mass movement of materials that slide on a curved plane and are generally smaller than what would be considered to be a large translational or rotational failure, which would also occur along a curved plane of motion.
- Rockfalls and debris flows are more general references to the downward movement of rock or soil materials.

Landslides can occur during earthquakes, triggered by the strain induced in soil and rock by the ground shaking vibrations. During non-earthquake (static) conditions, slope failures occur most frequently during the rainy season when high groundwater conditions persist. Landslides typically occur most frequently during or following large storms and in years with significant precipitation. Slides may occur slowly or suddenly, at times without apparent provocation. Possible landslide causes include gradual disintegration of the structure of the soil, an increase in pore water pressure, liquefaction of underlying soil, or horizontal acceleration due to earthquake ground shaking.

Geotechnical studies for the Baylands confirm that no landslides have been mapped within the Specific Plan area. The associated landslide hazard for the former landfill area is nil to very low because surface gradients are very gentle. Along the southwestern boundary of the former railyard area, moderate to locally steep relief is associated with bedrock outcrops in the vicinity of Icehouse Hill, near the Kinder Morgan Tank Farm; however, no landslides are documented for this area. The road cut on the west side of Icehouse Hill has experienced some rockfall, which the City has addressed through placement of concrete k-rail barriers to prevent falling rocks and soil from reaching Bayshore Boulevard travel lanes.

h. Paleontological Resources

The Baylands lies mostly on artificial fill (Qaf) overlying bay muds (Qm), including historical fill deposits. Thus, lands within the Specific Plan area other than Icehouse Hill are not natural features of the San Francisco Bay region. The Baylands geotechnical reports prepared by Geosyntec in 2021 (Appendices M.1, M.2) show that no bedrock was encountered in any borehole to depths of approximately 30 feet below ground surface (bgs) and that artificial fill overlies bay mud to a depth of approximately 3 to 13 feet bgs. Geotechnical bores did not extend below these deposits, but the geotechnical reports stated that the Pleistocene-aged Colma Formation sand (with some silt and clay) underlies the Young Bay Mud and is approximately 30 feet thick. The Pliocene-Pleistocene aged Merced Formation sandstone and secondary siltstone potentially underlies the Baylands, with Franciscan bedrock at a depth of 50 to 60 feet bgs underneath these layers.

The Colma and Merced formations have a well-established record of hosting significant marine and terrestrial vertebrates. In addition, a search of the online holdings of the University of California Museum of Paleontology (UCMP; accessed March 2023) yielded a number of terrestrial Pleistocene vertebrates associated with the Colma and Merced formations, including sloths, horses, mammoths, mastodons, and camelids. Marine units of unlisted formation status that are likely to be the Merced formation based on age have yielded over 280 invertebrate fossils. An additional search of the Paleobiological Database (paleodb.org; accessed March 2023) provided a number of critical invertebrate and vertebrate fossils from the Merced Formation in San Mateo County.

4.15.3 REGULATORY CONTEXT FOR BAYLANDS DEVELOPMENT

a. Federal Laws, Plans, Programs, and Regulations

National Earthquake Hazards Reduction Program

The National Earthquake Hazards Reduction Program was established by the Earthquake Hazards Reduction Act of 1977, Public Law (PL) 95–124. In establishing the Program, Congress recognized that earthquake-related losses could be reduced through improved designs, including improved construction methods and practices; land use controls, including redevelopment; prediction techniques and early-warning systems; coordinated emergency preparedness plans; and public education and involvement programs. The four basic goals of the National Earthquake Hazards Reduction Program are to:

- Develop effective practices and policies for reducing earthquake-related losses and accelerate their implementation.
- Improve techniques for reducing the earthquake vulnerabilities of facilities and systems.
- Improve earthquake-related hazards identification and risk assessment methods and their use.
- Improve the understanding of earthquakes and their effects.

Implementation of Earthquake Hazards Reduction Program priorities is accomplished primarily through original research, publications, and recommendations to assist and guide state, regional, and local agencies in development of plans and policies that promote safety and emergency planning. For example, the Program's *Recommended Seismic Provisions for New Buildings and Other Structures* presents a set of recommended improvements to the ASCE/SEI 7-16 Standard: Minimum Design Loads and Associated Criteria for Buildings and Other Structures, intended for use by national standards and code organizations and earthquake engineering professionals.

b. State Laws, Plans, Programs, and Regulations

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act was passed in 1972 to mitigate surface fault rupture hazards to structures used for human occupancy by preventing the construction of such structures on top of the traces of active faults. Although the Act addresses the hazards associated with surface fault rupture, it does not address other earthquake-related hazards, such as seismically induced ground shaking, liquefaction, or landslides.

The Act has led to the establishment of regulatory zones, referred to as Earthquake Fault Zones, around the mapped surface traces of active faults, including mapping of these zones. Before a development project can be permitted within an Earthquake Fault Zone, local agencies must require preparation of a site-specific geologic investigation and written report by a licensed geologist demonstrating that proposed buildings would not be constructed across active faults. If an active fault is found, structures for human occupancy cannot be placed over the trace of the fault and must be set back a minimum of 50 feet from the fault.

The Baylands Specific Plan area is not located within a designated Alquist-Priolo Earthquake Fault Zone.

Seismic Hazards Mapping Act

The State of California requires analysis of the seismic stability of slopes for certain projects. Pursuant to the Seismic Hazards Mapping Act of 1990 (Chapter 7.8, Sections 2690 et. seq., California Public Resources Code). The purpose of the Act is to protect public safety from the effects of strong ground shaking, liquefaction, landslides, or other ground failure; or other hazards caused by earthquakes. The Seismic Hazards Mapping Act is a companion and complement to the Alquist-Priolo Earthquake Fault Zoning Act, which addresses only surface fault-rupture hazards.

Pursuant to the Act, the State Geologist has mapped seismic hazard zones to assist local governments in addressing seismic hazards. Public Resources Code Section 2697(a) states that "cities and counties shall require, prior to the approval of a project located in a seismic hazard zone, a geotechnical report defining and delineating any seismic hazard." The City-required geotechnical reports delineating seismic hazards that were prepared for the Baylands Specific Plan are provided as Draft EIR Appendix M.1 (area west of the Caltrain right-of-way) and M.2 (area east of the Caltrain right-of-way).

California Geological Survey Special Publication 117A, Guidelines for Evaluating and Mitigating Seismic Hazards in California

Special Publication 117A provides, among other things, definitions, caveats, and general considerations for earthquake hazard mitigation, including seismic slope stability along with tools for screening and evaluation of slope stability and liquefaction hazards. The Guidelines provide a summary overview of analysis and mitigation of earthquake-induced landslide hazards. Special Publication 117A also provides guidelines for the review of site-investigation reports by regulatory agencies who have been designated to enforce the Seismic Hazards Mapping Act.

California Building Code

The California Building Code (CBC) has been codified in the California Code of Regulations (CCR) as Title 24. Title 24 is administered by the California Building Standards Commission, which, by law, is responsible for coordinating all building standards. The 2022 California Building Standards Code (CCR Title 24) was published on July 1, 2022, with an effective date of January 1, 2023. The current CBC (2022) was adopted by the City of Brisbane ("City") in Title 15, Buildings & Construction, of the City's Municipal Code.

Purpose and Application

The purpose of the CBC is to establish minimum standards to safeguard the public health, safety, and general welfare through structural strength, means of egress facilities, and general stability by regulating and controlling the design, construction, quality of materials, use and occupancy, location, and maintenance of all buildings and structures within its jurisdiction. The 2022 edition of the CBC became effective on January 1, 2023. The provisions of the CBC apply to the construction, alteration, movement, replacement, and demolition of every building or structure, or any appurtenances connected or attached to such buildings or structures throughout California.

Chapter 16, Structural Design

The CBC includes earthquake design requirements in Chapter 16, Structural Design. Specifically, Chapter 16, Section 1613 provides earthquake loading specifications for design and construction to resist the effects of earthquake motion in accordance with the American Society of Civil Engineers (ASCE) 7-05 document, Minimum Design Loads for Buildings and Other Structures.

Chapter 18, Soils and Foundations

Chapter 18, *Soils and Foundations*, of the California Building Code provides criteria for geotechnical and structural considerations in the selection, design, and installation of foundation systems to support various loads imposed by structures. This chapter covers the requirements of geotechnical investigations (Section 1803); excavation, grading, and fills (Section 1804); load bearing of soils (Section 1806); foundations (Section 1808); shallow foundations (Section 1809); and deep foundations (Section 1810). Chapter 18 also describes analysis of expansive soils and the determination of the depth to groundwater table. For Seismic Design Categories C, D, E, and F, Chapter 18 requires analysis of slope instability, liquefaction, total and differential settlement, and surface displacement due to faulting or seismically induced lateral spreading or lateral flow.

Section 1803 includes requirements for geotechnical investigations. Section 1803 requires that the geotechnical investigation be prepared by a geotechnical engineer registered in the State of

California with the advice of a certified engineering geologist and other technical experts, as necessary. The approved engineering geologic report is required to be submitted with, or as part of, the geotechnical report. The geotechnical investigation must cover soil classification, questionable soils, expansive soils, groundwater table, deep foundations, rock strata, excavation near foundations, compacted fill material, and controlled low-strength material. Additional studies must be made as necessary to evaluate slope stability, soil strength, position and adequacy of load-bearing soils, the effect of moisture variation on soil-bearing capacity, compressibility, liquefaction, and expansiveness.

Section 1803.7 of the CBC requires geohazard reports for all proposed construction to identify geologic and seismic conditions that may require mitigation. The reports must assess the nature of the site and potential for earthquake damage based on appropriate investigations of the regional and site geology, project foundation conditions, and potential seismic shaking at the site. These reports must consider the most recent:

- California Geologic Survey Note 48 (Checklist for the Review of Engineering Geology and Seismology Reports for California Public Schools, Hospitals, and Essential Services Buildings);
- California Geologic Survey Special Publication 42: Fault Rupture Hazard Zones in California (for project sites proposed within an Alquist-Priolo Earthquake Fault Zone); and
- California Geologic Survey Special Publication 117: Guidelines for Evaluating and Mitigating Seismic Hazard in California (for project sites proposed within a Seismic Hazard Zone).

All conclusions of required geologic and earthquake engineering reports must be fully supported by satisfactory data and analysis. The City of Brisbane regulates construction activities through a process that requires the preparation of a site-specific geotechnical investigation, consistent with Title 24, Part 2, Chapter 18 of the CBC. Site-specific geotechnical investigations have been performed by ENGEO and are included in Appendix M.

California Residential Code and California Green Building Standards Code

CCR Title 24 also includes the California Residential Code and the California Green Building Standards Code, commonly referred to as "CALGreen." The California Residential Code includes structural design standards for one- and two-family dwellings and covers all structural requirements for conventional construction. All other structures, including multi-family residential projects, are found in the other parts of the CBC, as discussed above.

CALGreen establishes minimum mandatory standards as well as voluntary standards pertaining to the planning and design of sustainable site development, energy efficiency, water conservation, material conservation, and interior air quality. The CALGreen standards took

effect in January 2011 and instituted mandatory minimum environmental performance standards for all new construction of commercial buildings, low- and high-rise residential buildings, state-owned buildings, schools, and hospitals.

California Code of Regulations, Title 27, Section 21190

CCR, Title 27, Section 21190 pertains to development in or within 1,000 feet of active, inactive, and abandoned solid waste landfills. It requires that all proposed post-closure land uses be designed and maintained to:

(1) Protect public health and safety and prevent damage to structures, roads, utilities, and gas monitoring and control systems;

(2) Prevent public contact with waste, landfill gas, and leachate; and

(3) Prevent landfill gas explosions.

This regulation dictates various construction requirements for buildings, including measures to mitigate the effect of differential settlement through use of flexible connections and utility collars for the placement of utilities.

Public Resources Code Sections 5097.5 and 30244

State requirements for paleontological resource management are included in Public Resources Code Sections 5097.5 and 30244. These statutes prohibit the removal of any paleontological site or feature from public lands without permission of the jurisdictional agency, define the removal of paleontological sites or features as a misdemeanor, and require reasonable mitigation of adverse impacts to paleontological resources from developments on public (state, county, city, district) lands.

c. City of Brisbane Plans, Ordinances, and Regulations

General Plan

General Plan policies and programs relevant to geology, soils, and seismicity issues raised by the Baylands development are identified below.

Chapter X: Community Health and Safety Element

This General Plan chapter contains the following relevant policies and programs:

Policy 149: Construct new buildings and retrofit existing ones to withstand seismic forces.

Program 149a: Require that all new construction meet current codes for seismic stability.

Program 149b: Consider a requirement, in conjunction with both residential and non-residential rehabilitation or reconstruction, that some portion of the improvements be devoted to improving seismic safety.

Program 149e: Require soils reports and engineering recommendations for structural stability in conjunction with building permit applications in areas which have been identified as prone to seismically induced landslides or subsidence in seismic events.

Policy 152: Consider issues of slope stability in conjunction with development applications.

Program 152a: Require soil and geologic investigations in areas identified as prone to slope instability. Consider both on-site and off-site impacts.

Program 152b: Unless adequate mitigating measures are undertaken, prohibit land alteration, including any grading and structural development, in identified areas of slope instability.

Program 152c: Require topographical and soils information for all projects on slopes identified over 20 percent.

Program 152e: Encourage placement of structures away from areas identified as prone to slope failure or erosion unless effective mitigation measures are proposed as a part of the project design.

Program 152g: Strictly enforce the provisions of the City's Grading Ordinance.

Policy 175: Assure that any development otherwise permitted on lands filled with municipal waste is safe by implementing the following programs.

Program 175a: Exchange information with the California Integrated Waste Management Board, San Mateo County Environmental Health Division and other responsible agencies regarding the requirements for safe and successful landfill development, utilizing the experience of Sierra Point.

Program 175b: Require evidence that scientific testing and verification has taken place to the satisfaction of regulatory agencies.

Program 175c: Encourage property owners of filled lands to complete all testing and related requirements of the Federal, State and local agencies well in advance of requesting land use permits from the City.

Chapter XII: Policies and Programs by Subarea

This General Plan chapter contains the following relevant policies:

Policy BL.28: Meet applicable seismic requirements in all construction, with special attention to non-engineered fill.

Policy BL.31: Require improvement of drainage and correction of hillside erosion and flooding on Bayshore Boulevard.

Municipal Code

Title 15 of the Brisbane Municipal Code, Buildings and Construction, incorporates the CBC, 2022 Edition, as the building code of the City along with the following construction-related codes.

- Chapter 15.01, Grading
- Chapter 15.04, adopting Title 24 of the California Code of Regulations, 2022 Edition of the California Building Standards Code including:
    - 2022 California Administrative Code, Title 24, Part 1.
    - 2022 California Building Code, Volumes 1 and 2, based on the 2021 International Building Code (ICC), Title 24, Part 2, including Appendix G Flood Resistant Construction, Appendix I Patio Covers, and Appendix J Grading.
    - 2022 California Residential Code, based on the 2021 Edition International Residential Code (ICC), Title 24, Part 2.5, including Appendix H Patio Covers, Appendix J Existing Building and Structures, Appendix K Sound Transmission, and Appendix V Swimming Pool Safety Act.
    - 2022 California Electrical Code, based on the 2020 Edition National Electric Code as published by the National Fire Protection Association (NFPA), Title 24, Part 3.
    - 2022 California Mechanical Code, based on the 2021 Uniform Mechanical Code as published by the International Association of Plumbing and Mechanical Officials (IAPMO), including all appendix chapters, Title 24, Part 4.
    - 2022 California Plumbing Code, based upon the 2021 Uniform Plumbing Code as published by the International Association of Plumbing and Mechanical Officials (IAPMO), including all appendix chapters, Title 24, Part 5.
    - 2022 California Energy Code, Title 24, Part 6.
    - 2022 California Historical Building Code, Title 24, Part 8.
    - 2022 California Fire Code, Title 24, Part 9, and modifications thereof, contained in Chapter 15.44.

- 2022 California Existing Building Code based on the 2021 International Existing Building Code Edition, published by the International Code Council, together with those omissions, amendments, exceptions, and additions thereto as amended in Part 10 of the California Building Standards Code, California Code of Regulations Title 24.
- 2022 California Green Building Standards Code, Title 24, Part 11.
- 2022 California Referenced Standards Code, Title 24, Part 12.
- The 2021 International Property Maintenance Code.

4.15.4 RELEVANT SPECIFIC PLAN PROVISIONS

Specific Plan goals relevant to geology, soils, and seismicity issues raised by the Baylands development are identified below.

Goal 7.2.2: Promote Creation of a Safe Site Through Earthwork and Soils Remediation.

Program 149a: This goal addresses the following General Plan requirements:

"The single specific plan and development agreement subject to City review and approval referenced above shall include:

(i) detailed plans for Title 27 compliant closure of the landfill and Remedial Action Plans (RAPs) for OU-1 and OU-2 that have been approved by all appropriate regulatory agencies, which include, but shall not be limited to, CalRecycle, the San Mateo County Environmental Health Department, the California Department of Toxic Substances Control, the California Regional Water Quality Control Board

(ii) a specific schedule establishing time frames by which (i) the landfill must be closed in full compliance with Titles 27 and (ii) the remediation of OU-1 and OU-2 must be completed; and

(iii) specific means by which the City may enforce the applicant's adherence to the schedule for closure and remediation and specific consequences, e.g., monetary penalties, suspension of building permits, etc., that the City may impose on the applicant for failing to adhere to the schedule." (GP1-18, 3(A))

and:

- "All residential development shall be designed and remediated to accommodate ground level residential uses and ground level residential-supportive uses such as daycare, parks, schools, playgrounds, and medical facilities." (GP-1-18, (3C))

and:

- "Sufficient assurances for the satisfactory ongoing performance of site remediation and site development (e.g., site monitoring, performance bonds, environmental insurance) shall be provided as determined by the City." (GP-1-18, 3(F))

and:

- "Prior to issuance of a grading permit to export soil or move soil from the existing landfill area for incorporation in a remediation or grading plan, the soil shall be tested in a manner approved by the City." (GP-1-18, 3(K))

OU-SM was previously known as OU-1 and is subsequently named by California Department of Toxic Substances Control (DTSC) as "OU-SM" and is indicated as such herein.

To promote a safe site for all planned uses, Feasibility Study/Remedial Action Plans (RAPs)[340,341] and the Title 27 Landfill Closure Plan[342] have been developed and approved by the applicable regulatory agencies. Adherence to the remediation efforts is overseen by the applicable regulatory agencies in conformance with Chapter 6.8 of the California Health and Safety Code. The landfill closure and post-closure maintenance plans are overseen by the applicable agencies pursuant to Title 27 of the California Code of Regulations. The phasing schedule of remediation activities is described in Section 9.2, Phasing.

4.15.5 SIGNIFICANCE CRITERIA

The following criteria were used to determine the significance of geology, soils, and seismicity impacts:

Threshold GEO-1: **The Baylands Specific Plan would cause a significant impact if it would directly or indirectly cause a substantial risk of loss, injury, or death involving rupture of a known earthquake fault, including but not limited to those delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area as well as those identified based on other substantial evidence of a known potentially active fault.**

340 Geosyntec, *Feasibility Study/Remedial Action Plan (FS/RAP) for the San Mateo County Portion of Universal Paragon Operable Unit (UPC OU-SM)*, October 11, 2021.

341 Geosyntec, *Feasibility Study/Remedial Action Plan (FS/RAP) for the Brisbane Baylands Operable Unit 2 (OU-2)*, December 22, 2021.

342 ENGEO, *Baylands Closure and Post Closure Maintenance Plan Volume 1*, January 25, 2023, revised January 8, 2025.

Threshold GEO-2: The Baylands Specific Plan would cause a significant impact if it would directly or indirectly cause a substantial risk of loss, injury, or death by exposing people or structures to strong seismic ground shaking.

Threshold GEO-3: The Baylands Specific Plan would cause a significant impact if it would directly or indirectly cause a substantial risk of loss, injury, or death by exposing people or structures to secondary effects of seismic shaking, including liquefaction or seismic-related ground failure (e.g., ground lurching, lateral spreading).

Threshold GEO-4: The Baylands Specific Plan would cause a significant impact if it would directly or indirectly cause a substantial risk of loss, injury, or death due to slope instability, subsidence, or soil collapse.

Threshold GEO-5: The Baylands Specific Plan would cause a significant impact if it would directly or indirectly cause a substantial risk of loss, injury, or death by exposing structures for human occupancy to expansive soils or soil corrosivity.

Threshold GEO-6: The Baylands Specific Plan would cause a significant impact if it would directly or indirectly destroy a unique paleontological resource or site, or a unique geologic feature.

Threshold GEO-7: The Baylands Specific Plan would cause a significant impact if it would include use of septic tanks or alternative wastewater disposal systems on soils that are incapable of supporting such use.

Erosion, siltation, and sedimentation are addressed in Section 4.14, *Hydrology and Water Quality*.

4.15.6 PROJECT IMPACTS AND MITIGATION MEASURES

a. Impact GEO-1: Fault Rupture

Methodology for Determining Significance

The analysis of impacts related to fault rupture is based on the geotechnical reports prepared for the Baylands in 2022 (Appendix M.1 and M.2). In determining whether a significant impact would result from the Baylands Specific Plan, the analysis reasonably assumes compliance with independently enforceable federal, state, and local laws and requirements, including the Alquist-Priolo Earthquake Fault Zoning Act. If any structure for human occupancy would be proposed within an Alquist-Priolo Earthquake Fault Zone or astride any other known potentially active fault, a significant impact related to fault rupture would occur if the setbacks established by a site-specific geotechnical analysis providing precise mapping of the fault were not met.

Impact Assessment

As discussed above, there are no known active or potentially active fault traces across the Baylands, and the site is not located within an Alquist-Priolo Earthquake Fault Zone.

Significance Conclusion for Impact GEO-1

Because there are no known active or potentially active fault traces across the Baylands, and the site is not located in an Alquist-Priolo Earthquake Fault Zone, no impact related to rupture of a known earthquake fault would result.

b. Impact GEO-2: Seismic Ground Shaking

Methodology for Determining Significance

In determining whether a significant impact would result from the 2025 Specific Plan project, the analysis reasonably assumes new buildings and restoration of historic structures comply with federal, state, and local laws and requirements, including the California Building Code (CBC), which sets standards for buildings to withstand seismic events as well as with recommendations of geotechnical studies designed to achieve building code compliance (e.g., Appendices M.1, M.2). Existing state law and building codes provide for an adequate level of safety such that buildings constructed to code would withstand ground shaking forces of a minor earthquake without damage, of a moderate earthquake without structural damage, and of a major earthquake without collapse of the structure. In addition, critical facilities and structures (e.g., fire stations) built to code would remain functional following a major earthquake. Any building designed for human occupancy meeting applicable seismic design standards would be considered to have a less than significant impact.

The geologic hazards present within the Baylands have been studied and documented in numerous geotechnical investigations that were performed within various portions of the Baylands by several different reputable geotechnical firms, and were presented in geotechnical evaluations completed in 1990, 2006, and 2008 (Kleinfelder 1990; Geosyntec 2006; Treadwell & Rollo, Inc. 2008; Geosyntec 2008 as cited in the Brisbane Baylands Program Environmental Impact Report) prior to preparation of the previous Brisbane Baylands Program EIR, in addition to the 2022 ENGEO geotechnical studies for the western and eastern portions of the Baylands as part of the site remediation and landfill closure plans, as well as for this EIR (Appendices M.1, M.2). The 2022 geotechnical studies provide a sound understanding of soil geotechnical conditions within the Baylands, along with their associated hazards, and present sufficient information to analyze the geotechnical feasibility of the Specific Plan development.

The CBC sets forth specific performance standards for improvements to foundation soils, such as compaction or densification, combined with building foundation design criteria based on

underlying soil properties necessary to provide adequate protection to the public during and following an earthquake event. The 2022 Baylands geotechnical studies provide specific recommendations to ensure compliance of future site-specific development projects with CBC standards.

As site-specific development and infrastructure projects are designed and proposed specifying the precise location, dimensions, height, and design of each individual building within the Baylands, geotechnical studies completed to date would be supplemented to provide requirements for individual foundation designs. This is because (1) the precise location, height, and bulk of each future building within the Baylands cannot be known at this time; and (2) the foundation system for each building site must be designed in accordance with the site-specific engineering properties of the materials beneath the structure, combined with the intended loading (weight) of the structure itself. It is common practice to prepare a more detailed design-level study later in the design process, after the specific design has been determined.[343]

Thus, while existing geotechnical analyses include mapping the depth of fill materials and Bay Mud within the Baylands, as the precise location, height, seismic design, and loading of each building within the Baylands becomes known as part of site-specific development proposals, site-specific investigations would:

- Determine the specific depth of the fill materials and Bay Mud at each building site; and
- Provide requirements, in compliance with the CBC, for individual foundation designs, including determining whether shallow foundations or deep foundation pilings are appropriate, along with the number and dimensions of each deep foundation.

Per CBC requirements, design specifications are determined according to the seismic design category, including earthquake loading specifications for every structure, and portions thereof that are permanently attached to structures and their supports and attachments. These features must be designed and constructed to resist the effects of earthquake motions anticipated within the applicable seismic design category. Thus, compliance with CBC performance standards as specified in a site-specific geotechnical study would be indicative of a less than significant impact in relation to seismic ground shaking.

Impact Assessment

The 2025 Specific Plan project would add residents, employees, and new structures for human occupancy within a seismically active region that would likely experience at least one major

[343] See *California Oak Foundation v. Regents of University of California* [2010] 188 Cal.App.4th 227 [rejecting claims that a detailed geotechnical study then underway was required to be prepared before EIR certification]; *Oakland Heritage Alliance v. City of Oakland* [2011] 195 Cal.App.4th 884 [upholding EIR's analysis based on a preliminary geotechnical analysis of the site, with a detailed design-level geotechnical study to be prepared as part of the building design].

earthquake (M_W 6.7 or greater) within the next 20 years, producing considerable ground accelerations. The specific intensity of such an event and resulting ground shaking within the Baylands would depend on the specific characteristics of the earthquake, including the causative fault, distance to the epicenter, depth of the rupture below ground surface, the moment magnitude, and the duration of shaking. Peak ground accelerations of 0.76g for the western portion of the site and 0.60g in the eastern portion of the site were used in conjunction with the mapped maximum considered earthquake.

Structures for human occupancy constructed pursuant to the Specific Plan would be required to comply with applicable seismic design regulations at the time of construction. The CBC, as adopted in the Brisbane Municipal Code, includes provisions to reduce impacts caused by potential major structural failures or loss of life resulting from earthquakes and other geologic hazards. For example, the CBC requires that a California Certified Engineering Geologist or California-licensed civil engineer prepare a site-specific engineering analysis that demonstrates the satisfactory performance of each proposed structure, including requirements for design and construction of structures to resist loads and peak ground accelerations that could result from earthquakes. In addition, Municipal Code section 15.01.210 (implementing the CBC) requires that a site-specific soil engineering report be prepared to include appropriate subsurface exploration, laboratory testing, and engineering analysis necessary to provide specific foundation, floor slab, and grading recommendations that include considerations for type of occupancy, building structural system, and height and that are required to be incorporated into grading plans and specifications as a condition of approval for each building site. Deep foundation systems would be required for most structures over 3 stories in height to ensure they are founded on dense competent materials that occur at depth.

In addition, the landfill owner is required to comply with California Code of Regulations (CCR), Title 27, Section 21130(c), which requires the operator to amend emergency response plans should post-closure land use and/or structures on the site change and these changes are not addressed in existing plans.

Significance Conclusion for Impact GEO-2

Because the Specific Plan area is located in a seismically active region, buildings and other structures developed within the Baylands would be at risk of damage related to seismic ground shaking and could directly or indirectly expose people to a risk of loss, injury, or death compared to baseline.

New structures for human occupancy would conform to the seismic design parameters of the CBC, while restoration of the Roundhouse would be subject to California Building Code seismic standards for historic structures. Compliance with these requirements would be reviewed by the City of Brisbane for appropriate inclusion in the building plan check and development review process prior to issuance of grading and building permits. Baylands geotechnical studies

prepared for this EIR (Appendices M.1, M.2) provide recommendations for compliance with CBC standards, state law and building codes, final geotechnical studies for each site-specific development project will define precise requirements for the foundation system for each building site needed for compliance with the CBC based on the site-specific engineering properties of the materials beneath the structure, combined with the intended loading (weight) of the structure itself.

Thus, because each building within the Baylands would comply with CBC requirements as specified in site-specific geotechnical studies, a less than significant impact would result.

c. Impact GEO-3: Liquefaction and Seismic-Related Ground Failure

Methodology for Determining Significance

The analysis of impacts related to risk of loss, injury, or death as the result of liquefaction or seismic-related ground failure (liquefaction-induced ground settlement, lateral spreading, ground lurching) is based on the geotechnical reports prepared for the Baylands in 2022 (see Appendices M.1, M.2). The analysis considers the risk of loss, injury, or death due to liquefaction or seismic-related ground failure that would occur as the result of the Specific Plan increasing the number of people and buildings in locations subject to these conditions. In determining whether a significant impact would result, the analysis reasonably assumes compliance with federal, state, and local laws and requirements, including CBC requirements for new construction and restoration of historic structures, as well as geotechnical report recommendations aimed at minimizing the risks to life and property from liquefaction and seismic-related ground failure.

The CBC covers the requirements of geotechnical investigations; excavation, grading, and fills; and load bearing of soils (Section 1805), as well as foundations (Section 1808), shallow foundations (Section 1809), and deep foundations. The CBC also describes analysis of expansive soils and the determination of the depth to groundwater table. The CBC specifies risk-related screening standards and requirements for analyses of slope instability, liquefaction, and surface rupture attributable to faulting or lateral spreading, plus an evaluation of lateral pressures on basement and retaining walls, liquefaction and soil strength loss, and lateral movement or reduction in foundation soil-bearing capacity. It also addresses specific measures to be considered in structural design, which may include ground stabilization, selection of appropriate foundation type and depths, selection of appropriate structural systems to accommodate anticipated displacements, or any combination of these measures. The potential for liquefaction and soil strength loss must be evaluated for site-specific peak ground acceleration magnitudes and source characteristics consistent with the design earthquake ground motions. Thus, compliance with CBC performance standards as specified in a site-specific geotechnical study would be indicative of a less than significant impact in relation to ground failure and liquefaction.

Impact Assessment

Liquefaction

The Specific Plan area is underlain by Bay Mud that contains saturated sand lenses susceptible to liquefaction. The landfill portion of the site contains buried municipal waste materials that may also be prone to liquefaction during strong ground shaking. Analysis of Baylands soils data determined that liquefaction susceptibility is present throughout the site, within both the former railyard area and the former landfill area (see Appendices M.1, M.2). Liquefaction within the Baylands following a major earthquake could result in loss of bearing pressure, lateral spreading, sand boils (liquefied soil exiting at the ground surface), and other potentially damaging effects if not addressed in the geotechnical engineering design of buildings and infrastructure.

The final design-level geotechnical reports required under the California Building Code would be prepared by a licensed professional and submitted to the City for review and approval. As is standard for the geotechnical industry, the final design-level geotechnical reports for each site-specific development would address the site-specific potential for liquefaction and lateral spreading and provide recommendations for each building and for infrastructure improvements to reduce potential damage in accordance with CBC requirements.

Seismic-Related Ground Failure

Secondary effects of seismic shaking resulting from large earthquakes along the major faults in the Bay Area include lateral spreading and ground lurching.

Lateral Spreading

Lateral spreading is a ground failure condition induced by liquefaction that causes soil to move toward a free face (e.g., a slope along a creek) or down a gentle slope and can cause ground cracking and settlement that may gradually propagate away from the face as blocks continue to break free. Geotechnical studies prepared for the Baylands identified a likely continuous potentially liquefiable sand layer beneath the Young Bay Mud. Because this layer varies from 40 to 90 feet deep, well below the bottom of the adjacent San Francisco Bay at the shoreline along the eastern border of the landfill, the geotechnical study (Appendix M.1) states "the risk of liquefaction-induced lateral spreading is negligible."

Ground Lurching

Lurching is the movement of the ground surface toward an open face (e.g., graded slope, stream bank, or other similar feature) when the soil liquefies. Ground lurching can cause surface cracks to form, with the potential for such cracks being greater at contacts between deep alluvium and bedrock. The geotechnical studies prepared for the Baylands (Appendices M.1, M.2) state that ground lurching, while possible based on the Baylands location within the Bay Area, would be minor.

Significance Conclusion for Impact GEO-3

Because of the presence of high groundwater and loose, unconsolidated soils underlying the Specific Plan area, which is located in a seismically active region, liquefaction could occur within the Baylands, adversely affecting structures. As documented in the geotechnical studies prepared for the Baylands in 2022 (Appendices M.1, M.2), a substantial risk of loss, injury, or death by exposing people or structures to secondary effects of seismic shaking (e.g., ground lurching, lateral spreading) would not result from Baylands development. Nevertheless, due to the presence of high groundwater and loose, unconsolidated soils underlying the project site, liquefaction within the Baylands following a major earthquake could result in loss of bearing pressure, lateral spreading, sand boils (liquefied soil exiting at the ground surface), and other potentially damaging effects if not addressed in geotechnical engineering design of buildings and infrastructure.

Baylands development would be required to conform to site-specific foundation design parameters required for compliance with the CBC (Municipal Code Sections 15.01.210, Soils Engineering Report and 15.01.220, Engineering Geology Report), which are reviewed by the City of Brisbane for appropriate inclusion in the building plan check and development review process prior to issuance of grading and building permits.

Site-specific geotechnical analyses building upon the information provided in the geotechnical studies prepared for the Baylands in 2022 would identify the specific seismic and foundation design parameters and monitoring to be required by the City for Baylands development to comply with the CBC based on site-specific geotechnical conditions and the precise location, height, massing, and bulk of each future building within the Baylands.

Thus, impacts would be less than significant.

d. Impact GEO-4: Slope Stability

Methodology for Determining Significance

The analysis of impacts related to risk of loss, injury, or death as the result of on-site or off-site landslides is based on the geotechnical reports prepared for the Baylands in 2022 (Appendix M.1 and M.2), as well as 2008 studies by Geosyntec and Treadwell & Rollo, Inc. that were cited in the Program EIR. The analysis considers the risk of loss, injury, or death due to on- or off-site landslide that would result from the proposed Specific Plan increasing the number of people and buildings that may be subject to such hazards. In determining whether a significant impact would result from the Specific Plan, the analysis reasonably assumes grading and new construction would comply with CBC requirements, which are aimed at minimizing slope-stability hazards to life and property.

Impact Assessment

Baylands development would require substantial grading that would create manufactured slopes of fill materials along the Geneva Avenue extension and in other locations such as along Icehouse Hill trails where cut slopes will also be constructed. These constructed slopes have the potential for slope failure, which could damage proposed improvements or cause physical injury to Baylands residents, workers, or visitors.

Geotechnical analyses prepared for the Baylands in 2008 concluded that the placement of engineered fill could cause underlying Bay Mud to fail as the result of substantial additional loading. Geosyntec (2008) conducted slope-stability analysis for the former landfill area on a cross-section extending from the edge of the Brisbane Lagoon approximately 1,000 feet toward the north. The analysis showed that the extent of possible slope instability is estimated to extend from the edge of the Brisbane Lagoon north approximately 600 feet, increasing from 480 feet for existing conditions. Geosyntec (2006, 2008) recommended that fill not be placed within 600 feet of the edge of the Brisbane Lagoon[344] and that the stability of the area be re-evaluated once final designs are available. The Baylands Specific Plan proposes placement of fill on existing rip rap along the north shore of the lagoon to facilitate habitat restoration, along with grading to construct Lagoon Park and its habitat enhancements and recreational features. The placement of such fill within 600 feet of the edge of the lagoon would be less than 10 feet deep.

Although not specifically analyzed in current Baylands geotechnical analyses, given that soils would be potentially unstable under static conditions, they would also likely be unstable under dynamic conditions.

Significance Conclusion for Impact GEO-4

Site-specific development projects would comply with Brisbane General Plan policy requirements and the most recent California Building Code requirements for slope stability of manufactured slopes. All final design and engineering plans submitted for Baylands development would be subject to review and approval by the City of Brisbane Building Official prior to issuance of a grading or building permit.

Although manufactured slopes constructed as part of Baylands development would be required to comply with the most recent California Building Code requirements at the time of construction to ensure the stability of existing and manufactured slopes under static and pseudo-static conditions, placement of fill within 600 feet of the north shore of the lagoon would be inconsistent with recommendations of the 2008 geotechnical study prepared for the Baylands and Program EIR Mitigation Measure 4.E-4a and would therefore risk causing instability in the Bay Mud that underlies this area.

[344] The recommendation was included in Program EIR Mitigation Measure 4.E-4a.

Impact GEO-4 would therefore be significant.

Program EIR Mitigation Measures

MM GEO-4a: Manufactured Slopes (Program EIR Mitigation Measure 4.E-4a). Site-specific development projects within the Baylands shall not place new fill materials within 600 feet of Brisbane Lagoon, except when required for roadway improvements, habitat enhancement, recreational facilities, or other site improvements permitted by the Specific Plan. Placement of new fill materials within 600 feet of the Brisbane Lagoon shall be designed to prevent erosion of soils into the lagoon during and subsequent to construction. All manufactured slopes shall require certification by a licensed geotechnical engineer to the satisfaction of the City Engineer that a factor of safety of at least 1.5 for static conditions and 1.2 under dynamic conditions will be achieved.

Significance Conclusion with Implementation of Program EIR Mitigation Measures

Implementation of Mitigation Measure MM GEO-4a (Program EIR Mitigation Measure 4.E-4a) would ensure the stability of manufactured slopes throughout the Baylands. While Mitigation Measure MM GEO-4a exempts roadway improvements, habitat enhancement, recreational facilities, or other approved site improvements from the prohibition on placement of fills within 600 feet of the lagoon because such fills were anticipated to be relative shallow, such fills may still adversely affect the stability of underlying Bay Mud. A significant impact would remain.

Additional Mitigation Measures

MM GEO-4b: Placement of Fill Materials within 600 Feet of the Brisbane Lagoon. Placement of fill materials within 600 feet of the Brisbane Lagoon for roadway improvements, habitat enhancement, recreational facilities, or other approved site improvements shall require certification by a licensed geotechnical engineer to the satisfaction of the City Engineer that the stability of underlying Bay Mud would not be adversely affected.

Significance Conclusion with Implementation of All Mitigation Measures

The addition of Mitigation Measure MM GEO-4b ensures that placement of fill materials within 600 feet of Brisbane Lagoon for roadway improvements, habitat enhancement, recreational facilities, or other approved site improvements such as construction of Lagoon Park would not adversely affect the stability of underlying Bay Mud. Impact GEO-4 would therefore be reduced to less than significant with implementation of Mitigation Measures MM GEO-4a and MM GEO-4b.

e. Impact GEO-5: Expansive Soils and Soil Corrosivity

Methodology for Determining Significance

Because the Specific Plan area is known to contain corrosive soils, this section analyzes the proposed placement of underground utilities, concrete pilings, and concrete foundations to determine whether concrete or steel elements, including pile foundations, could be damaged by corrosive soils. In addition, because the Young Bay Mud underlying the Baylands has a highly expansive nature, this section analyzes whether a substantial risk of loss, injury, or death would result by exposing structures for human occupancy to expansive soil hazards.

In determining the level of significance, the analysis below reasonably assumes that Specific Plan development would comply with relevant federal, state, and regional laws and regulations, which are designed to reduce soils impacts related to corrosivity and expansiveness as well as with recommendations of geotechnical studies designed to achieve building code compliance (e.g., Appendices M.1, M.2).

Impact Assessment

The Young Bay Mud underlying the site is likely corrosive to metals and concrete due to high clay content and brackish Bay water. Thus, excavations into Bay Mud, such as those along Bayshore Boulevard and during construction of deep foundations, would encounter corrosive and expansive subsurface soils.

Due to its expansive nature and high natural moisture content, Baylands geotechnical studies recommend that Young Bay Mud excavated from the site not be incorporated into soils placed beneath Baylands structures to prevent damage to foundations (Appendix M.1. M.2). Instead, Young Bay Mud would either be removed or used in landscaping areas of the site. In addition, building foundations could be damaged by expansive soils if water is permitted to pond near building foundations or pavement.

Significance Conclusion for Impact GEO-5

Young Bay Mud underlying the Baylands is both expansive and corrosive. Existing state law and building codes provide for an adequate level of safety and the Baylands geotechnical studies prepared for this EIR provide recommendations for compliance with CBC standards, state law, and building codes that will be incorporated into site grading, as well as Baylands building and infrastructure construction. As noted above, the foundation system for each building within the Baylands must be designed in accordance with the site-specific engineering

properties of the soil characteristics beneath the structure and the specific loading characteristics of the building itself. Thus, to comply with the CBC:

- All concrete and metals in contact with corrosive soil would be designed and constructed based on the results of the site-specific soil corrosivity testing and subsequent recommendations of a qualified geotechnical engineer as reviewed and approved by the City. Treatment methods include coating, using galvanized metals, or cathodic protection.
- Building foundations and infrastructure in contact with expansive soils would be designed and constructed based on the results of the site-specific soil corrosivity testing and subsequent recommendations of a qualified geotechnical engineer as reviewed and approved by the City. Treatment methods include removal of expansive soils or chemical treatment such the addition of lime.

Impact GEO-5 is therefore less than significant.

f. Impact GEO-6: Paleontological Resources

Methodology for Determining Significance

A formation or rock unit is determined to have paleontological sensitivity based on previous studies of sediment types in the region that contain vertebrate, invertebrate, or plant fossils. Hence, a determination of the potential of paleontological resources to exist is based on the types of soils and rock that underlie a site and the potential for fossils suspected to occur in that unit, because generally the actual existence of fossils cannot be known until excavation for a development project is underway.

The geologic units that could be encountered by Specific Plan development range in their paleontological sensitivity. Most of the surface of the Specific Plan and off-site improvements consist of artificial fill which, by definition, has no potential for paleontological resources as any fossils found in the fill would be out of geological context. According to available geotechnical reports, both fine and coarse fill extend from the surface down to approximately 10 feet below ground surface. Bay Mud exposed at the surface is too young to host significant fossils. Surface exposures of Franciscan Formation sandstone and shale is unlikely to produce significant paleontological resources due to the paucity of known fossils, the lack of significant vertebrate fossils, and the low grade of metamorphism. The Specific Plan crosses exposures of Pleistocene slope and ravine alluvium (Qsr) that range from silt and clay through gravel. Although they are of an age that has a potential for significant Pleistocene vertebrates and contain fine-grained sediments that typically preserve fossils well, the lack of a published record of fossils means the paleontological potential of these deposits is unknown. The Colma and Merced formations have a well-established record of hosting significant marine and terrestrial vertebrates. Based on the

evidence presented in Section 4.15.2h, above, both the Colma and Merced formations are considered of high significance for paleontological resources.

Numerous paleontological studies have developed criteria for the assessment of significance for fossil discoveries. In general, these studies assess fossils as significant if one or more of the following criteria apply:

1. The fossils provide information on the evolutionary relationships and developmental trends among organisms, living or extinct;
2. The fossils provide data useful in determining the age(s) of the rock unit or sedimentary stratum, including data important in determining the depositional history of the region and the timing of geologic events therein;
3. The fossils provide data regarding the development of biological communities or interaction between paleobotanical and paleozoological biotas;
4. The fossils demonstrate unusual or spectacular circumstances in the history of life; or
5. The fossils are in short supply and/or in danger of being depleted or destroyed by the elements, vandalism, or commercial exploitation, and are not found in other geographic locations.

In summary, significant paleontological resources are determined to be fossils or assemblages of fossils that are unique, unusual, rare, uncommon, or diagnostically important. Significant fossils can include remains of large to very small aquatic and terrestrial vertebrates or remains of plants and animals previously not represented in certain portions of the stratigraphy. Assemblages of fossils that might aid stratigraphic correlation, particularly those offering data for the interpretation of tectonic events, geomorphologic evolution, and paleoclimatology, are also critically important.

The potential of the Baylands Specific Plan to result in impacts on paleontological resources is based on identification of the rock and soils within areas where ground disturbance and excavations would occur for the Specific Plan. A database search of the holdings of the University of California Museum of Paleontology was undertaken to determine the geologic formations underlying the Baylands and their sensitivity in relation to paleontological resources. Baylands grading, infrastructure, and development plans were reviewed to determine the likelihood of construction activities encountering sensitive geologic formations.

The paleontological assessment undertaken for the Baylands addresses both the Specific Plan area and the maximum extent, both horizontally and vertically, of both direct and indirect potential impacts resulting from Baylands development within the Specific Plan and off-site improvements, including areas of new construction and related activities (e.g., construction staging areas). The vertical extent of this Project Area consists of the maximum depth of ground disturbance anticipated to occur due to Specific Plan development.

Impact Assessment

Potential for Disturbing Paleontological Resources

Surficial and shallow excavations within the Project Area are anticipated to only encounter artificial fill and Holocene Bay muds and silts and would, therefore, not disturb paleontological resources. Similarly, excavations into the Franciscan Formation would not disturb significant paleontological resources as that formation has not demonstrated a sensitivity for significant fossil finds in this area. However, deep excavations for foundational support (greater than approximately 25 to 30 feet bgs) may reach the Pleistocene Colma or Pliocene-Pleistocene Merced formations, which have a high potential to host significant paleontological resources.

Significance Conclusion for Impact GEO-6

Disturbance of paleontological resources within the Colma or Merced formations would result in a significant impact due to their potential for paleontological resources. These formations are more than 25-30 feet below ground surface and the only deep excavations that would be undertaken for Baylands development within these formations would be pile foundation installation. Surficial and shallow excavations, which will make up the majority of ground-disturbing activity, have no potential to encounter or impact paleontological resources. Therefore, it is not likely that paleontological resources would be identified during ground disturbing within the Pleistocene Colma or Pliocene-Pleistocene Merced formations. If an inadvertently identified paleontological resource is damaged during construction, the impact would be significant.

Program EIR Mitigation Measures

No mitigation measures are carried forward from the Program EIR.

Additional Mitigation Measures

MM GEO-6a: Paleontological Resources Awareness Training. Prior to the start of any ground disturbing activities anticipated to exceed 25 feet in depth, the Qualified Paleontologist, or a paleontological specialist under the supervision of the Qualified Paleontologist, shall conduct pre-construction worker paleontological resources sensitivity training. The Qualified Paleontologist, or a paleontological monitor under the supervision of the Qualified Paleontologist, shall contribute to any construction worker paleontological resources sensitivity training either in person or via a training module. The training shall include information on what types of paleontological resources could be encountered during excavations, what to do in case an unanticipated discovery is made by a worker, and laws protecting paleontological resources. All construction personnel shall be

informed of the possibility of encountering fossils and instructed to immediately inform the construction foreman or supervisor if any bones or other potential fossils are unexpectedly unearthed in an area where a paleontological monitor is not present. The Applicant shall ensure that construction personnel are made available for and attend the training and retain documentation demonstrating attendance.

MM GEO-6b: Inadvertent Discovery of Paleontological Resources. If a paleontological resource is discovered during construction, the paleontological monitor shall be empowered to temporarily divert or redirect grading and excavation activities in the area of the exposed resource to facilitate evaluation of the discovery. An appropriate buffer area shall be established by the Qualified Paleontologist around the find where construction activities shall not be allowed to continue. Work shall be allowed to continue outside of the buffer area. At the Qualified Paleontologist's discretion and to reduce any construction delay, the grading and excavation contractor shall assist the Qualified Paleontologist or paleontological monitor in removing rock samples for initial processing and evaluation of the find. All significant fossils shall be collected by the paleontological monitor and/or the Qualified Paleontologist. Collected fossils shall be prepared to the point of identification and catalogued before they are submitted to their final repository. Any fossils collected shall be curated at a public, non-profit institution with a research interest in the materials, such as the UCMP, if such an institution agrees to accept the fossils. If no institution accepts the fossil collection, they shall be donated to a local school in the area for educational purposes. Accompanying notes, maps, photographs, and a technical report shall also be filed at the repository and/or school.

Significance Conclusion for Impact GEO-6 with Implementation of Mitigation Measures

Implementation of Mitigation Measures MM GEO-6a and MM GEO-6b would reduce impacts to paleontological resources to a less-than-significant level by requiring training of construction personnel in paleontological resource identification and requiring a qualified paleontologist to be retained in the event that paleontological resources are identified in order to address any inadvertent discoveries. Mitigation Measure MM GEO-6b requires inadvertent discoveries of fossils to be collected by the paleontological monitor and/or Qualified Paleontologist, who would prepare, identify, and catalogue such discoveries prior to placing such discovered fossils at a public, non-profit institution, or public school for their preservation. While it is highly unlikely that paleontological resources would be found in the landfill or disturbed portions of the Project Area, required awareness training for construction personnel who are involved in ground disturbance in undisturbed areas of the Project Area would facilitate identification of any fossils inadvertently exposed during grading and excavation activities. Impact MM GEO-6 would be less than significant with mitigation incorporated.

g. Impact GEO-7: Use of Septic Tanks or Alternative Wastewater Systems

Methodology for Determining Significance

If use of septic tanks or alternative wastewater disposal systems were to be proposed by the Specific Plan, analysis would be undertaken to determine the suitability of soils for such systems. A significant impact would result should soils be incapable of supporting use of any proposed septic tanks or alternative wastewater disposal systems.

Impact Assessment

The Baylands Specific Plan requires construction of an integrated municipal sewer system to serve all proposed uses. Neither septic tanks nor alternative wastewater disposal systems would be used for Baylands development.

Significance Conclusion for Impact GEO-7

Because the Baylands Specific Plan requires construction of an integrated municipal sewer system to serve all proposed uses, septic systems or other alternative wastewater disposal systems would not be used and no impacts related to the capability of soils to support such wastewater treatment would result.

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4.16 UTILITIES, SERVICE SYSTEMS, AND WATER SUPPLY

4.16.1 INTRODUCTION

a. Overview

This section addresses the physical environmental effects associated with construction and operation of Baylands water, wastewater, energy, and telecommunications utilities, as well as solid waste management facilities. This section also addresses water demand, supply, and reliability for the 2025 Specific Plan project.

Because CEQA focuses on physical environmental effects, increased demand for such facilities and services is not considered to be a physical change in the environment. Instead, increased demand for utilities and service systems resulting from Baylands development are analyzed as potential precursors to construction of new or expanded facilities, the physical environmental effects of which are analyzed to determine significance.

Energy consumption and use of renewable energy resources are addressed in Section 4.11, *Energy Resources*. Flood management and drainage facilities are addressed in Section 4.14, *Hydrology and Water Quality*. Seismic safety issues related to Baylands utility facilities are addressed in Section 4.15, *Geology, Soils, and Seismicity*.

b. Definitions

Acre-foot is the volume of water required to cover 1 acre of land (43,560 square feet) to a depth of 1 foot. It is equal to 43,560 cubic feet or 325,851 gallons.

Biofiltration refers to the use of plants and landscaping to capture and biologically degrade pollutants. Capturing harmful chemicals or silt from surface runoff is a common form of biofiltration.

Recycled water is former wastewater (sewage) that is treated to remove solids and impurities to a level that is safe for beneficial uses, such as landscape irrigation.

Zero waste refers to maximizing diversion from landfills and reducing waste at the source, with the ultimate goal of not sending any waste to landfills. Given current technology and waste management practices, achieving at least 90 percent diversion of non-hazardous solid waste from landfill disposal is considered "zero waste."

4.16.2 ENVIRONMENTAL SETTING

a. Potable Water

Existing Water Service Agencies

City of Brisbane

Existing uses within the Baylands and City of Brisbane are served by one of the two water districts operated by the City to provide water to local residents and businesses. The Brisbane Water District serves Central Brisbane, Sierra Point, and the Baylands. The Guadalupe Valley Municipal Improvement District (GVMID) serves Crocker Park and the Northeast Ridge residential development. The City's two water districts are interconnected and are operated together, which allows the City to move water freely across the districts to supplement higher than normal demands in any portion of the City at any given time.

California Water Service Company

California Water Service Company (Cal Water), which is proposed to be the water supply agency for the Baylands, Sierra Point, and Beatty portions of Brisbane, is an investor-owned public utility supplying water service to approximately 1.8 million Californians through over 481,000 connections. Cal Water incorporated in 1926 and has provided potable water service to communities served by the South San Francisco District since 1931, when it purchased the South San Francisco Water Company. The South San Francisco District (District) operates the South San Francisco Public Water System (PWS). The District currently serves the communities of South San Francisco, Colma, a small portion of Daly City and an unincorporated area of San Mateo County known as Broadmoor, which lies between Colma and Daly City.

Cal Water, the City of Brisbane, Bayshore Sanitary District, and Baylands Development, Inc. have signed a non-binding letter of understanding that provides a framework to supply water to the Baylands, Beatty, and Sierra Point areas of Brisbane by expanding its service area into Brisbane. In addition, as discussed in Chapter 3, *Project Description*, expansion of Cal Water's service area is subject to discretionary actions by the San Mateo County Local Agency Formation Commission, California Public Utilities Commission, and San Francisco Public Utilities Commission.

Existing Wholesale Water Supply – San Francisco Public Utilities Commission

The City of Brisbane does not currently have its own groundwater or surface water supplies and purchases all of its potable water from the San Francisco Public Utilities Commission

(SFPUC). The City receives water from SFPUC through five turnouts[345] along SFPUC's Crystal Springs pipeline, under a Water Supply Agreement with SFPUC (EKI 2024).

San Francisco Regional Water System and Supply

SFPUC owns and operates the San Francisco Regional Water System ("Regional Water System") that serves more than 2.7 million residents and businesses in the San Francisco Bay Area (SFPUC 2021). Through its Regional Water System, SFPUC delivers approximately two thirds of its total water supply to wholesale customers,[346] with the remaining one third delivered to retail customers within and outside of San Francisco.

The SFPUC regional water system supply originates predominantly from Sierra Nevada snowmelt, with approximately 85 percent of the regional water supply sourced from the Tuolumne River via Hetch Hetchy Reservoir and aqueducts. The remaining 15 percent consists of treated water that is derived from local watersheds and the San Antonio, Calaveras, Crystal Springs, Pilarcitos, and San Andreas reservoirs (EKI 2024). Treated water from local sources is typically blended with Hetch Hetchy water before it is distributed to customers.

Bay Area Water Supply and Conservation Agency

The Bay Area Water Supply and Conservation Agency (BAWSCA) provides regional water supply planning, resource development, and conservation program services. BAWSCA members include 16 cities, 8 water districts, and 2 private water providers, including Cal Water, that provide water to over 1.8 million people and over 40,000 commercial, industrial and institutional accounts in Alameda, San Mateo, and Santa Clara counties. The City of Brisbane (and its two water districts) is a member of BAWSCA.

The SFPUC sells water to BAWSCA members and other wholesale customers under the terms of a Water Supply Agreement and individual water sales contracts that each of the wholesale customers have with the SFPUC. Since 1970, the SFPUC has supplied approximately 65 percent of the total wholesale customers' demand. Some of the wholesale customers, including Brisbane, are entirely reliant on the SFPUC for their supply (SFPUC 2021).

2018 Water Supply Agreement and Individual Water Sales Contracts

In July 2009, the SFPUC entered into a Water Supply Agreement (2009 Agreement), replacing its expiring predecessor agreement, the 1984 Settlement Agreement and Master Water Sales Contract between the SFPUC and the Wholesale Customers (1984 Agreement). The 2009

[345] Turnouts are structures usually constructed in a water conveyance facility for the purposes of diverting part of the water to a smaller conveyance system.

[346] SFPUC's wholesale customers are located in Alameda, Santa Clara, and San Mateo Counties, and also include the Groveland Community Services District (Groveland CSD) in Tuolumne County and Cordilleras Mutual Water Company in Redwood City.

Agreement, as amended and restated in December 2018, describes the current contractual relationship between the SFPUC and the Wholesale Customers (SFPUC 2021).

The 2009 Agreement carries forward the SFPUC's "Supply Assurance" of 184 million gallons per day (mgd) to the Wholesale Customers from the 1984 Agreement in which the SFPUC has agreed to deliver water to the Wholesale Customers up to the amount of the Supply Assurance. This agreement is perpetual and survives the expiration of the 2009 Agreement. The Supply Assurance is, however, subject to reduction due to water shortage, drought, scheduled regional water supply maintenance activities, and emergencies (SFPUC 2021).

Twenty-three of these 24 Wholesale Customers have an "Individual Supply Guarantee," which represents their dedicated individual share of the overall 184 mgd Supply Assurance.[347] The Individual Supply Guarantees are also perpetual and survive the expiration of the 2009 Agreement. Cal Water's Individual Supply Guarantee is 35.68 mgd, while the City of Brisbane's is 0.98 MGD (SFPUC 2021).

Each of SFPUC's 26 Wholesale Customers also has an individual water sales contract with the SFPUC that describes the wholesale customer's service area, location, and size of service connections between the regional water system and the customer's distribution systems, and in some instances additional specific provisions unique to the particular customer. The individual water sales contracts may be amended from time to time by the SFPUC and the applicable Wholesale Customers pursuant to the terms of the Water Supply Agreement (SFPUC 2021).

Water System Improvement Program

In October 2008, the SFPUC adopted Resolution No. 08-200, an extensive $4.8 billion Water System Improvement Program to upgrade the regional water system facilities. SFPUC's 2020 Urban Water Management Plan indicates that this multi-year capital infrastructure program is approximately 96 percent complete (SFPUC 2021). The Water System Improvement Program is intended to ensure the regional water system's ability to meet specified goals and objectives for water quality, seismic reliability, delivery reliability, and water supply. SFPUC's stated goals are to meet customer water needs in non-drought and drought periods (SFPUC 2021). The SFPUC adopted an alternative analyzed in the Program EIR for the WSIP, referred to as the Phased Water System Improvement Program Variant (SFPUC 2021).

[347] The Supply Assurance is shared among 24 of SFPUC's Wholesale Customers, representing all wholesale customers except the cities of San Jose and Santa Clara. The City of Hayward is the 24th Wholesale Customer, and does not have an Individual Supply Guarantee due to the terms of its 1962 individual water supply contract with the SFPUC that did not contain a fixed allocation of water. Hayward's unspecified water supply allocation is included as the difference between overall 184 mgd Supply Assurance and the sum of the other 23 Wholesale Customers' Individual Supply Guarantees. In the event that Hayward's water use exceeds its unspecified water supply allocation, the 23 Wholesale Customers with Individual Supply Guarantees would be required to reduce their Individual Supply Guarantees to accommodate Hayward's water demand.

The Phased Water System Improvement Program Variant includes the following water supply elements:

- Cap on regional water system deliveries at 265 mgd annual average, referred to as the "Interim Supply Limitation." This includes 184 mgd for the Wholesale Customers and 81 mgd for retail customers.
- Water supply sources include 265 mgd average annual from the regional water system and 20 mgd of water conservation, recycled water, and local groundwater developed within the SFPUC's service area (10 mgd in the retail service area and 10 mgd in the wholesale service area).
- Water supply projects to meet dry-year demands with no greater than 20 percent system-wide rationing in any one year.
- Reevaluation of 2030 demand projections, potential regional water system purchase requests, and water supply options by December 31, 2018, and a separate SFPUC decision no later than 2018 regarding regional water system future water deliveries after 2018. Per the SFPUC 2020 Urban Water Management Plan, this process has been postponed to 2028 to allow for the necessary supply assessments and environmental review (SFPUC 2021).

Existing and Projected Water Demand

Existing Regional Water Demand

In 2020, the SFPUC delivered approximately 198 mgd of regional water system supplies to its entire water service area, with an additional 2.3 mgd in local groundwater and recycled water provided to retail customers. Of the 198 mgd, 132 mgd was delivered to wholesale customers, 65 mgd to in-city retail customers, and 4 mgd to suburban retail customers (SFPUC 2021).

Existing Brisbane Water Demand

Historical annual water demand in Brisbane between 2000 and 2021 was approximately 232.6 million gallons (mg), reaching a peak of 264 mg in 2018, and declining to 220 mg in 2021, which reflects conservation efforts during the most recent drought.

The total existing annual water use provided by the City to the Baylands and proposed Cal Water Brisbane water service area is summarized in **Table 4.16-1**, based on actual water use from 2019 to 2023.

Table 4.16-1: Water Use Supplied by the City of Brisbane to the Area Proposed to Be Served by Cal Water (acre-feet per year)

Location	2019	2020	2021	2022	2023	Average
Baylands	1.49	1.68	1.80	1.50	1.52	1.60
Sierra Point	101.09	113.45	102.22	105.93	123.38	108.58
TOTAL WATER DEMAND	**102.58**	**115.13**	**104.02**	**107.43**	**124.90**	**110.17**

SOURCE: Brisbane Public Works, 2025

Water supply provided by Cal Water to its expanded service area within Brisbane would use a combination of potable water purchased from the SFPUC supplemented by five existing off-site groundwater wells and recycled water from the water recycling facility to be constructed within the Baylands. Cal Water potable supplies would be delivered via existing turnouts from the SFPUC Regional Water System. **Table 4.16-2** summarizes existing and projected future water demand within the Baylands, Beatty, and Sierra Point areas that are proposed to be served by Cal Water.

Table 4.16-2: Existing and Projected Potable Water Demand for the Portions of Brisbane Proposed to Be Served by Cal Water

	Existing		Projected Year 2045 (Baylands Specific Plan Buildout)		Change	
	MGD	AFY	MGD	AFY	MGD	AFY
Baylands Specific Plan Area:	0.018	21.0	1.03	1,149.0	+1.012	+1,128.0
Specific Plan Development	0.000	0.0	1.03	1,146.3	+1.030	+1,146.3
Existing Users	0.018	21.0	<0.01	2.7	-0.018	-18.3
Beatty and Sierra Point Subareas	0.104	122.0	0.44	493.0	+0.336	371.0
Baylands, Beatty, and Sierra Point Total	**0.122**	**143.0**	**1.47**	**1,642.0**	**+1.348**	**+1,499.0**

SOURCES: EKI Environment & Water, *Water Supply Assessment for the Guadalupe Quarry Redevelopment Project*, October 2024; EKI Environment & Water, *Water Supply Assessment for the Baylands Specific Plan*, January 2025.

MGD = million gallons per day; AFY = acre-feet per year

BAWSCA's Long-Term Reliable Water Supply Strategy

BAWSCA's Long-Term Reliable Water Supply Strategy Phase II Final Report (BAWSCA Strategy), completed in 2015, does not project a regional need for additional water supplies to meet normal year demands through 2040 (not including full Baylands buildout). However, the BAWSCA Strategy identifies reliability shortfalls on the regional water system of up to 43 mgd in dry years during the same planning period, resulting in system-wide regional water system supply cutbacks of up to 20 percent. The BAWSCA Strategy identifies nine specific projects, which, if all were successfully implemented, would effectively meet the 43 mgd dry year supply need (BAWSCA 2015, 2022).

The BAWSCA Strategy identifies recommended actions to maximize the likelihood that its member agencies could provide water when and where it is needed, including leading water

transfer development and implementation and identifying and evaluating water storage options (BAWSCA 2022).

b. Water Facilities

Regional Facilities

The SFPUC regional water system supplies drinking water from the Tuolumne River watershed and from local reservoirs in the Alameda and Peninsula watersheds. The regional water system draws an average of 85 percent of its supply from the Tuolumne River watershed, which is collected in Hetch Hetchy Reservoir in Yosemite National Park.

This water feeds into an aqueduct system delivering water 167 miles by gravity to Bay Area reservoirs and customers. SFPUC draws the remaining 15 percent of its regional water system supply from local surface waters in the Alameda and Peninsula watersheds. The split between these resources varies from year to year depending on the water year hydrology and operational circumstances. During dry years, the water received from the Hetch Hetchy System can amount to over 90 percent of the total water delivered (SFPUC 2021).

The Hetch Hetchy Project, also referred to as the Hetch Hetchy Regional Water System, is generally composed of the reservoirs, hydroelectric generation and transmission facilities, and water transmission facilities from the Hetch Hetchy Valley west to the Alameda East Portal of the Coast Range Tunnel in Sunol Valley. In the Hetch Hetchy System, water is diverted from Hetch Hetchy Reservoir into a series of tunnels and aqueducts from the Sierra Nevada to the San Joaquin Pipelines that cross the San Joaquin Valley to the Coast Range Tunnel, which connects to the Alameda System at the Alameda East Portal (SFPUC 2021). Local watershed facilities are operated to conserve local runoff for delivery and to maintain enough stored water to meet demands in the event of an emergency that affects the supply of water.

Regional Water Treatment

The Hetch Hetchy Reservoir is the largest unfiltered water supply on the west coast, and one of only a few large unfiltered municipal water supplies in the nation. The water originates from well-protected wilderness areas in Yosemite National Park, which flows down the Tuolumne River to Hetch Hetchy Reservoir. This water meets or exceeds all federal and state criteria for watershed protection. Water from Hetch Hetchy Reservoir is protected in pipes and tunnels as it is conveyed to the Bay Area and requires pH adjustment to control pipeline corrosion and disinfection for bacteria control. Based on the SFPUC's disinfection treatment practice, extensive bacteriological quality monitoring, and high operational standards, the U.S. Environmental Protection Agency (USEPA) and the SWRCB Division of Drinking Water determined that the Hetch Hetchy water source meets federal and state drinking water quality requirements without the need for filtration (SFPUC 2021).

A USEPA regulation that took effect in 2012 requires secondary disinfection for all unfiltered drinking water systems to control the waterborne parasite cryptosporidium. To comply with this regulation, the SFPUC completed construction of a new ultraviolet (UV) treatment facility. The Tesla Treatment Facility is a key component of SFPUC's Water System Improvement Program and enhances the high-quality water from the regional water system. The facility has a capacity of 315 mgd, making it the third largest UV drinking water disinfection facility in the nation (SFPUC 2021).

Regional Water Storage

The amount of water available to the SFPUC at any given time is determined by hydrology, physical facilities, and the institutional parameters that allocate the water supply of the Tuolumne River. During dry years, only a small share of the Tuolumne River supply may be available to the SFPUC, and the local watersheds produce very little water. Reservoir storage is critical during drought cycles because it enables the SFPUC to carry over water supply from wet years to dry years (SFPUC 2021).

Three major reservoirs collect runoff: Hetch Hetchy Reservoir, Lake Lloyd (a.k.a. Cherry Lake), and Lake Eleanor. A "water bank" in New Don Pedro Reservoir is also integrated into regional water system operations. New Don Pedro Reservoir, which is jointly owned and operated by Modesto Irrigation District and Turlock Irrigation District, is located on the Tuolumne River downstream of the Hetch Hetchy System. Normally, only Hetch Hetchy Reservoir water supplies are exported to the Bay Area (SFPUC 2021).

Downstream of the Hetch Hetchy System, the SFPUC uses local watersheds in the Bay Area. Crystal Springs, San Andreas, and Pilarcitos Reservoirs, which are all located in San Mateo County, capture local runoff in the Peninsula watershed, and Calaveras and San Antonio Reservoirs, which are located in Alameda Country, capture local runoff in the Alameda watershed. In addition to capturing local runoff, San Andreas, San Antonio, and Crystal Springs Reservoirs also provide storage for water from the Hetch Hetchy System and, along with Calaveras Reservoir, are an important water supply in the event of an interruption to Hetch Hetchy System deliveries (SFPUC 2021).

Existing City of Brisbane Water System

The citywide water distribution system includes about 25 miles of water mains ranging in diameter from 6 to 16 inches. The system is designed to have the capacity to deliver water at a residual pressure of 50 pounds per square inch gage (psig) during peak-hour demand where technically and economically feasible and at least 35 psig. The system is also designed to maintain at least 20 psig during maximum-day demand coincident with a fire flow. The distribution system is in good condition.

Existing Cal Water System

Cal Water's South San Francisco District, which delivers potable water to residential, commercial, industrial, and governmental customers, operates five groundwater wells, 12 storage tanks, 21 booster pumps, and 144 miles of pipeline to deliver roughly six million gallons of water per day to more than 16,000 service connections.

c. Wastewater System

The City of Brisbane provides sanitary sewer collection services to approximately 3,600 residents, several commercial areas, and some light industrial development in the Bayshore, Central Brisbane, Crocker Industrial Park, Guadalupe Canyon, and Sierra Point areas of Brisbane. Wastewater collection services within the Baylands are provided by the Bayshore Sanitary District (BSD). BSD's service area also includes Daly City and parts of Brisbane outside of the Baylands. Both the City and BSD contract with the SFPUC for wastewater treatment.

Existing Collection System

Bayshore Sanitary District Wastewater Collection System

The oldest BSD lines in service date back to 1925, are located along Geneva Avenue and Tunnel Avenue, and are still serviceable. The majority of BSD sewer lines are much newer, with only 24 percent of the sewer lines over 50 years old. The older lines are predominately vitrified clay pipe (VCP), and the newer lines are poly-vinyl chloride (PVC) pipe. Current District standards specify PVC AWWA C900 for both the mainline and laterals (BSD 2021).

Flows from Daly City and the Baylands are collected through a system of gravity pipes and force mains at the BSD Industrial Way lift station, which is located near the intersection of Bayshore Boulevard and Industrial Way. From the Industrial Way lift station, wastewater is pumped to the SFPUC's 78-inch combined storm and wastewater main in Sunnydale Avenue and then flows by gravity under US Highway 101 to the Harney Way 20'x30' Box Storage Culvert and Sunnydale lift station. Flow is then conveyed through a series of conduits, tunnels, and lift stations, eventually arriving at SFPUC's Southeast Treatment Plant for treatment (BKF 2022).

City of Brisbane Wastewater Collection System

The City of Brisbane wastewater collection system serves approximately 3,600 residents, several commercial areas, and some light industrial development in the Bayshore, Central Brisbane, Crocker Industrial Park, Guadalupe Canyon, and Sierra Point areas of Brisbane. A series of gravity collection system mains and smaller pumping stations convey most of the wastewater flow to the Valley Drive Pump Station, located near the corner of Bayshore Boulevard and Valley Drive. At the Valley Drive pump station, flow is conveyed north along Bayshore Boulevard through a series of 12-inch and 16-inch force mains to the same 78-inch combined

storm and wastewater main in Sunnydale Avenue as BSD sewage flows. City of Brisbane sewage is also treated at SFPUC's Southeast Treatment Plant.

Existing Baylands Specific Plan Area Sewer Facilities

There are existing sanitary sewer lines serving the Industrial Way buildings and other buildings within the Baylands west of the Caltrain right-of-way. The location of these existing facilities are outside of the Specific Plan's planned roadway system and do not have adequate capacity to handle projected Baylands sewage generation (BKF 2022). Existing sewer lines will, therefore, be removed to make way and provide service for future development.

Sewage from the existing Kinder Morgan Tank Farm is pumped from a small lift station within the property through a 4-inch force main to an existing 21-inch BSD line within Tunnel Avenue. From the sewer main in Tunnel Avenue, sanitary sewer flow is conveyed to the 78-inch SFPUC combined storm and wastewater main in Sunnydale Avenue and then to the Southeast Treatment Plant for treatment (BKF 2022).

Wastewater Treatment by SFPUC

Southeast Treatment Plant

Located in the Bayview District of southeastern San Francisco, the Southeast Treatment Plant is a 250-mgd pure-oxygen activated-sludge treatment facility that provides secondary treatment and serves municipal and industrial customers on the east side of San Francisco, as well as Brisbane and the BSD. The treatment plant was originally constructed in 1952 and subsequently upgraded several times. The Southeast Treatment Plant is part of San Francisco's combined sewer system, which allows the collection and treatment of both wastewater and stormwater (SFPUC 2010) in a single system. The wastewater treated at the Southeast Treatment Plant is discharged to San Francisco Bay through two outfalls (SFPUC 2010).

The Southeast Treatment Plant treats 57 mgd of wastewater, handling 160 wet tons of biosolids each day. During rainstorms, the plant can treat up to 250 mgd (100 mgd of primary treatment and 150 mgd of secondary treatment) of wastewater (Tuser 2020). The Plant has a daily dry weather flow average design capacity of 85 mgd, a peak hour design capacity of 142 mgd, and can treat up to 250 mgd (100 mgd of primary treatment and 150 mgd of secondary treatment) of wet weather flows (SFPUC 2010). The current average daily dry weather flow is approximately 60 mgd, which accounts for approximately 70 percent of its available dry weather flow capacity (BKF 2022).

In response to the need to modernize aging wastewater infrastructure, the SFPUC launched a multi-billion-dollar Sewer System Improvement Program. The SFPUC is upgrading its Southeast Treatment Plant to address earthquake preparedness, sea-level rise, and operational efficiency, as well as to reduce odors and improve the quality of life for nearby residents and

employees. Two of the largest projects, the Biosolids Digester Facilities Project and New Headworks Facility Project, are currently under construction. The Biosolids Digester Facilities Project will replace and relocate the existing (and outdated) solids treatment facilities with more reliable, efficient, and modern technologies and facilities (SFPUC 2024a). The existing 35-year old Headworks facility is at the end of its useful life and is being replaced with a new Headworks facility, upgrades to the Bruce Flynn Pump Station, and an odor control structure (SFPUC 2024b).

North Point Wet Weather Facility

The North Point Wet Weather Facility was commissioned in 1951. In the early 1980's it was connected to the Southeast Treatment Plant through a force main. The North Point Facility is now used as a primary treatment plant for wet weather flows from the northeast portion of the Bayside Watershed (SFPUC 2010a).

The North Point Facility only operates during, and shortly after, significant rainfall events. Its peak hourly treatment capacity is 150 mgd. On average, it operates 30 times per year (450 hours), treating an annual average total flow of 700 million gallons (4 percent of the annual average total citywide wastewater flow) (SFPUC 2010a). The North Point Facility operates when the Southeast Treatment Plant approaches capacity (BKF 2022).

Parallel Combined Sewer Facility

To further reduce the frequency of combined sewer overflows into the Bay and increase system capacity, San Francisco recently constructed a parallel 169-inch combined sewer facility along the San Francisco - San Mateo County line directly north of the Baylands (BKF 2022).

City of Brisbane Dry Weather Sewer Discharges

Under its current contract with SFPUC, the City of Brisbane is allowed to convey up to 6.0 mgd of dry weather sewer discharges to the Southeast Treatment Plant. As identified in the 2017 City of Brisbane Sanitary Sewer System Master Plan (2017 SSMP) by Erler and Kalinowski, Inc. (EKI), current discharges for dry weather and wet weather conditions are approximately 0.72 mgd and 3.6 mgd, respectively (BKF 2022).

The BSD's contract with the SFPUC does not have a set treatment capacity allocation at the Southeast Treatment Plant based on its current contract. The established BSD protocol has been for BSD to notify Southeast Treatment Plant staff and confirm that capacity is available for projects generating a demand greater than 200,000 gallons per day (gpd) (BKF 2022).

d. Non-Hazardous Solid Waste

Solid Waste Service Agencies

Recology San Francisco provides solid waste collection and recycling services for the Specific Plan area. The South San Francisco Scavenger Company serves other portions of Brisbane.

Recology San Francisco

Recology provides solid waste collection, recycling, and disposal services for residential and commercial customers in San Francisco and the Baylands through a three-cart collection program that requires, under San Francisco's Mandatory Recycling and Composting Ordinance, customers to sort solid waste into recyclables; compostable items, such as food scraps and yard trimmings; and garbage.

Materials are collected and hauled to the Recology transfer station/recycling center on Tunnel Avenue, adjacent to the Baylands' northerly boundary. The 60-acre transfer facility sorts and consolidates waste streams for diversion programs and subsequent transport to other facilities. The facility currently achieves a 75 percent diversion rate for construction and demolition waste.

The 126-acre Blossom Valley Organics facility processes in excess of 700,000 tons of food scraps, plant trimmings, food-soiled fiber products, and other organic materials annually for compost.

Recycle Central at Pier 96 processes up to 700 tons of waste daily, achieving an estimated 80 percent recovery rate with less than 2 percent contamination. Recyclable materials are sent to the Recycling Center at Pier 96 in San Francisco, where they are separated and sold to manufacturers that turn the materials into new products.

Solid waste generated in San Francisco that is not recycled is hauled to Recology's Hay Road Landfill in Solano County. The Hay Road Landfill is permitted by Solano County and the California Department of Resources Recycling and Recovery (CalRecycle) to accept up to 2,400 tons per day of municipal solid waste for disposal. The Hay Road Landfill has an anticipated closing date of January 1, 2077.

South San Francisco Scavenger Company

Waste collected by South San Francisco Scavenger Company is transported to the Blue Line Transfer Incorporated Public Disposal and Recycling Facility for sorting and processing. The Blue Line Facility, which is located in South San Francisco, has a permitted capacity of 2,400 tons of waste per day and an average daily throughput of 1,200 tons a day (CalRecycle 2022d).

Existing Waste Diversion

Recology San Francisco

Recology San Francisco collects and processes all residential and commercial waste, along with recycling and composting through its subsidiaries: San Francisco Recycling and Disposal, Golden Gate Disposal and Recycling, and Sunset Scavenger. All materials are taken to the San Francisco Solid Waste Transfer and Recycling Center where they are sorted for transport to composting and recycling facilities and the Hay Road Landfill in Solano County.

In 2018, the City and County of San Francisco updated its waste reduction targets, which included reducing the amount of municipal solid waste by 15 percent by 2030 and reducing landfill disposal and incineration by 50 percent by 2030. In 2023, Recology disposed of 520,749 tons of solid waste generated in San Francisco, a 20.6 percent reduction from the 656,267 tons of solid waste generated in San Francisco disposed of at landfills in 2018 (CalRecycle 2024b).

City of Brisbane

Brisbane, in cooperation with waste haulers, provides services and programs that have resulted in 76 percent of the waste generated by residents and businesses being diverted from landfills, exceeding the state's goal of 75 percent waste diversion by 2020 (City of Brisbane 2024c). In 2020, Brisbane had approximately 49 different waste diversion programs in effect to reduce waste generation, including composting, recycling, and public education programs (CalRecycle 2022b).

As discussed above in Section 4.16.3 *State Plans, Policies, and Regulations*, since the implementation of the revised diversion measurement system under SB 1016, the City of Brisbane has achieved compliance by remaining below the calculated per capita disposal target set by the state. According to CalRecycle, the City of Brisbane has a per resident disposal rate target of 16.9 pounds/person/day and a per employee disposal rate target of 7.9 pounds/person/day. The most recent approved data (2023) from CalRecycle for the City of Brisbane identified the annual per capita disposal rate per resident as 12.6 pounds/person/day. The annual per capita disposal rate per employee was 6.9 (CalRecycle 2024).

Landfill Capacity

Brisbane's overall landfill waste stream disposal was 6,719 tons in 2020, 8,245 tons in 2019, and 6,896 tons in 2018 (CalRecycle 2024a). In 2019, solid waste from Brisbane was sent to the Altamont Landfill & Resource Recovery, Corinda Los Trancos Landfill (Ox Mountain), Potrero Hills Landfill, Recology Hay Road, Recology Ostrom Road LF Inco, Vasco Road Sanitary Landfill, and Zanker Material Processing Facility (CalRecycle 2024a.) Total capacity of those landfills is shown in **Table 4.16-3**.

e. Communications Infrastructure

Existing telecommunications facilities within and adjacent to the Baylands serve the few existing facilities within the Baylands. Removal and replacement of existing telecommunications facilities is anticipated as part of Baylands development based on the large-scale demands of Specific Plan development compared to existing Baylands development (BKF 2023).

f. Kinder Morgan Tank Farm Jet Fuel Infrastructure

An existing high-pressure liquid gas line conveys jet fuel from the Kinder Morgan Tank Farm to the San Francisco Airport. This fuel line runs from the tank farm along an alignment parallel to the north side of the Brisbane Lagoon to US Highway 101.

Table 4.16-3: Landfills and Processing Facilities Receiving Solid Waste from the City of Brisbane

Name	Location (County)	Total Permitted Capacity (million cubic yards)	Total Estimated Capacity Used (million cu. yards) (% of total)	Remaining Estimated Capacity (million cubic yards) (% of total)	Estimated Closure Date	Permitted Maximum Disposal (tons/day)
LANDFILLS						
Recology						
Hay Road	Solano	37.0	6.6 (18%)	30,433,000	1/1/2077	2,400
Ostrom Road	Yuba	43.5	4.2 (10%)	39,223,000	12/31/2066	3,000
Other						
Altamont Landfill & Resource Recovery	Alameda	124.4	59.0 (47%)	65,400,000	12/1/2070	11,150
Corinda Los Trancos (Ox Mountain)	San Mateo	60.5	38.3 (63%)	22,180,000	1/1/2034	3,598
Potrero Hills	Solano	83.1	69.2 (83%)	13,872,000	2/14/2048	4,330
Vasco Road	Alameda	40.2	35.2 (88%)	5,010,000	12/31/2051	2,518
PROCESSING FACILITIES						
Zanker Material Processing Facility	Santa Clara	0.64	N/A	N/A	11/1/2025	350
TOTAL		**382,077,231**		**179,127,000**		**27,346**

SOURCE: CalRecycle, 2024a and 2024c; Regional Water Quality Control Board, 2022 (https://waterboards.ca.gov/sanfranciscobay/board_info/agendas/2022/june/5c_to.pdf)

NOTES: Landfills identified in **bold type** received the majority of solid waste from City of Brisbane in 2019.

4.16.3 REGULATORY CONTEXT FOR BAYLANDS DEVELOPMENT

a. Federal Laws, Plans, Programs, and Regulations

Safe Drinking Water Act

The Safe Drinking Water Act gives the United States Environmental Protection Agency (USEPA) the authority to set drinking water standards for public water systems that provide water for human consumption through at least 15 service connections or regularly serve at least 25 individuals. There are two categories of drinking water standards: the National Primary Drinking Water Regulations (Primary Standards) and the National Secondary Drinking Water Regulations (Secondary Standards). Primary Standards protect drinking water quality by limiting the levels of specific contaminants that can adversely affect public health and are known or anticipated to occur in water. The Act protects against both naturally occurring and human-made contaminants in drinking water and requires that information on the quality of drinking water be made available to the public.

Within California, the Department of Health Services (DHS) implements the requirements of the Act and oversees public water system quality state-wide in accordance with federal and state standards.

Resource Conservation and Recovery Act

At the federal level, the USEPA regulates the management of non-hazardous solid waste according to the Resource Conservation and Recovery Act (RCRA), Subtitle D. Subtitle D establishes state and local governments as the primary planning, regulating, and implementing agencies for management of non-hazardous solid waste. The USEPA provides these governments with information, guidance, and policies to promote recycling, waste reduction, and safe handling of solid waste. As required by RCRA, the USEPA has developed federal criteria for the design and operation of municipal solid waste landfills and other disposal facilities, which have since been adopted by most states, including California.

b. State Laws, Plans, Programs, and Regulations

Municipal and Special District Service Area Boundaries

Cortese–Knox–Hertzberg Local Government Reorganization Act

The Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 establishes procedures for local government changes of organization, including city incorporations, annexations to a city or special district, city and special district consolidations, and special district service areas. Local Agency Formation Commissions (LAFCOs) have been established in

all 58 counties pursuant to this act with the authority to approve boundary changes and to adopt spheres of influence for local cities and special districts.

LAFCOs' regulatory powers are outlined in California Government Code Sections 56375 and 56133, and include approving, establishing, expanding, reorganizing, and, in limited circumstances, dissolving cities and special districts. LAFCOs are also responsible for approving service extensions outside a city's or special district's service area by contract or agreement.

LAFCOs' planning responsibilities are explicit to informing their regulatory powers and highlighted by establishing spheres of influence for all cities and special districts. Spheres of influence indicate the territory that the LAFCO independently believes represents the appropriate and probable future jurisdictional boundary and service area of each city and special district. All jurisdictional boundary changes and outside service extensions, notably, must be consistent with the agency's spheres of influence, with limited exceptions.

Potable Water Supply and Facilities

California Urban Water Management Planning Act (Water Code Section 10610)

Section 10610 of the California Water Code requires urban water suppliers to initiate planning strategies to ensure an appropriate level of water service reliability. Every urban water supplier that provides water to 3,000 or more customers, or that annually provides more than 3,000 acre-feet (AF) of water service, should make every effort to ensure the appropriate level of reliability in its water service to meet the needs of its various categories of customers during normal, dry, and multiple-dry years. The Act describes the contents of Urban Water Management Plans as well as methods for urban water suppliers to adopt and implement the plans.

Because the City of Brisbane has only approximately 2,040 service connections and supplies less than 3,000 acre-feet of water annually, it does not meet the definition of "Urban Water Supplier" and it is not required to complete an Urban Water Management Plan.

Cal Water adopted its 2020 Urban Water Management Plan for the South San Francisco District in June 2021. Because it did not anticipate expanding its service area into Brisbane at the time it was written, Cal Water's 2020 Urban Water Management Plan did not anticipate future water demand within the City of Brisbane.

SFPUC adopted its 2020 Urban Water Management Plan in June 2021. SFPUC's 2020 Urban Water Management Plan extrapolated data to estimate future water demand for the City of Brisbane through 2045.

Water Shortage Contingency Plans

California Water Code Section 10632 requires that every urban water supplier prepare and adopt a water shortage contingency plan as part of its Urban Water Management Plan. Section 10632.2 provides that, "An urban water supplier shall follow, where feasible and appropriate, the prescribed procedures and implement determined shortage response actions in its water shortage contingency plan … or reasonable alternative actions, provided that descriptions of the alternative actions are submitted with the annual water shortage assessment report pursuant to Section 10632.1." Notwithstanding, the California Water Code does not prohibit an urban water supplier from taking actions not specified in its water shortage contingency plan, if needed, without having to formally amend its urban water management plan or water shortage contingency plan. The City of Brisbane adopted a Water Shortage Contingency plan in September 2014. Cal Water's adopted Water Shortage Contingency Plan is presented as Appendix L of its 2020 Urban Water Management Plan. SFPUC adopted its 2020 Water Shortage Contingency along with its 2020 Urban Water Management Plan in June 2021.

Water Supply Assessment and Water Supply Verification

Senate Bill 610

Senate Bill (SB) 610 requires public urban water suppliers with 3,000 or more service connections to identify existing and planned sources of water for planned developments of a certain size. It further requires the public water system to prepare a specified Water Supply Assessment for the following types of projects:

- A proposed residential development of more than 500 dwelling units;
- A proposed shopping center employing more than 1,000 persons or having more than 500,000 square feet of floor space;
- A commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space;
- A hotel or motel, or both, with more than 500 rooms;
- An industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 sf of floor area; or
- A mixed-use project that includes one or more of the projects above.

A Water Supply Assessment must address existing water demand and future water demand by the project and must ensure that water is available for the project during normal years, a single dry year, and multiple dry years during a 20-year future projection period. The Water Supply Assessment must also describe whether the project's water demand is accounted for in the water supplier's Urban Water Management Plan. Supplies of water for future use must be

documented in the Water Supply Assessment. Because the Specific Plan area meets several of these criteria, a water supply assessment was completed for the EIR in 2024, according to the requirements of SB 610. Water supply for the Baylands is proposed to be provided by Cal Water. The water supply assessment was completed Cal Water and is included as **Appendix P** to this EIR.

Senate Bill 221

SB 221 requires the local water provider to provide "written verification" of "sufficient water supplies" to serve proposed development projects. SB 221 applies to residential projects of 500 units or more (infill or low-income or very-low-income housing subdivisions are exempt) and requires the land use planning agency to include as a condition of approval of a tentative map, parcel map, or development agreement a requirement that "sufficient water supply" be available. In most cases, the Water Supply Assessment required by SB 610 meets the SB 221 requirement for proof of water supply.

SB 221 differs from SB 610 in that "sufficiency" is determined by also considering the availability of water over the past 20 years, the applicability of any urban water shortage contingency analysis prepared pursuant to Water Code Section 10632, the reduction in water supply allocated to a specific use by an adopted ordinance, and the amount of water that can be reasonably relied upon from other water supply projects, such as conjunctive use, reclaimed water, water conservation, and water transfer.

"Making Water Conservation a California Way of Life" Regulation

In July 2024, the Water Resources Control Board adopted the "Making Water Conservation a California Way of Life" regulation to implement SB 606/AB 1668 annual water use objective requirements. As part of this regulation, urban water suppliers are required to calculate and report their Urban Water Use Objective beginning in January 2024 and every year thereafter. The Urban Water Use Objective is an estimate of efficient urban water use based on the adopted urban water use efficiency standards and local service area characteristics. By January 2027, compliance with the Urban Water Use Objective will be enforced.

The Making Conservation a California Way of Life regulation establishes agency-specific conservation goals for each urban retail water supplier. As part of the regulation, urban retail water suppliers – not individual households or businesses – will be held to "urban water use objectives." The regulation, which can be found at California Code of Regulations, title 23, section 965 et seq., requires urban retail water suppliers to annually calculate and comply with an urban water use objective; carry out commercial, industrial, and institutional performance measures; and provide progress reports.

California Green Building Standards Code

The California Green Building Standards Code (Part 11 of Title 24) is commonly referred to as "CALGreen" and establishes minimum mandatory standards as well as voluntary standards pertaining to the planning and design of sustainable site development, energy efficiency, water conservation, material conservation, and interior air quality. The CALGreen standards took effect in January 2011 and instituted mandatory minimum environmental performance standards for all ground-up, new construction of commercial, low- and high-rise residential and state-owned buildings and schools and hospitals. The CALGreen 2022 standards became effective on January 1, 2023.

The residential and nonresidential mandatory standards require the following measures that relate to utilities and service systems (24 CCR Part 11):

- Mandatory reduction in indoor water usage through installation of separate submeters or metering devices (for nonresidential uses) and compliance with specified flow rates for water conserving plumbing fixtures and fittings and faucets and fountains.
- Mandatory reduction in outdoor water usage through compliance with a local water efficient landscaping ordinance or the California Department of Water Resources' Model Water Efficient Landscape Ordinance, which ever is more stringent, and installation for recycled water supply systems where available/applicable (for nonresidential uses).
- 65 percent of construction and demolition waste must be diverted from landfills and 100 percent of trees, stumps, rocks, and associated vegetation and soils resulting primarily from land clearing shall be reused or recycled.
- Provide readily accessible areas for recycling that serve the entire building.

CALGreen standards that have been adopted by the City of Brisbane also include voluntary efficiency measures that are provided at two separate tiers and implemented at the discretion of local agencies and applicants. These voluntary measures call for indoor and outdoor water use reduction, higher diversion of construction and demolition waste, further improvement in energy requirements, stricter water conservation, increased percentage of recycled content in building materials, increase in permeable paving, cement reduction, and cool/solar-reflective roofs.

Recycled Water

In California, the Department of Public Health and the State Water Resources Control Board are the primary agencies responsible for regulating the treatment, distribution, and use of recycled water. The main state laws and regulations governing the use of recycled water are described below:

- **California Health and Safety Code (Division 104; Part 12)** requires recycled water pipes installed above or below ground to be colored purple.

- **California Water Code (Division 7; Chapters 2,6, 7, and 22)** establishes recycled water permits to streamline the permitting process for recycled water, prohibits unauthorized discharges of recycled water, and requires the use of recycled water for non-potable purposes whenever suitable recycled water is available. Proposed recycled water projects require submission of an engineering report to the Department of Public Health and State Water Board to describe compliance with California Code of Regulations Title 22 requirements.
- **Title 17 of California Code of Regulations (Division 1; Chapter 5)** sets specific infrastructure standards to prevent contamination of potable water with recycled water.
- **Water Recycling Act of 1991 (Sections 13575–13583)** established a state-wide goal of recycling 1.0 million acre-feet of water annually by the year 2010 and encouraged retail water suppliers to increase the use of recycled water. This was meant to encourage state and local agencies to implement recycled water projects whenever feasible.
- **Recycled Water Policy** includes numeric goals for the use of recycled water, two narrative goals to encourage recycled water use in groundwater-overdrafted and coastal areas, and annual reporting requirements state-wide for the volume of recycled water produced and used as well as the volume of wastewater treated and discharged. The goals include:
    - Increase the use of recycled water from 714,000 acre-feet per year (afy) in 2015 to 1.5 million afy by 2020 and to 2.5 million afy by 2030.
    - Reuse all dry weather direct discharges of treated wastewater to enclosed bays, estuaries, coastal lagoons, and ocean waters that can be viably put to a beneficial use. For the purpose of this goal, treated wastewater does not include discharges necessary to maintain beneficial uses and brine discharges from recycled water facilities or desalination facilities.
    - Maximize the use of recycled water in areas where groundwater supplies are in a state of overdraft, to the extent that downstream water rights, instream flow requirements, and public trust resources are protected.
- **SBDDW-22-001 Regulations for On-Site Treatment and Reuse of Non-Potable Water.** California Water Code section 13558 requires the State Water Board to adopt regulations for on-site treatment and reuse of non-potable water in multifamily residential, commercial, and mixed-use buildings on or before December 1, 2022. Water Code section 13558 also requires that on or before December 1, 2023, the Department of Housing and Community Development, in consultation with the State Water Board, is required to develop and propose for adoption any necessary corresponding building standards to support the risk-based water quality standards established by the State Water Board. The risk-based water quality standards will not address untreated graywater systems that are used exclusively for subsurface irrigation and untreated rainwater systems that are used exclusively for surface, subsurface, or drip irrigation.

As of this date, the Water Boards' staff is working on the rulemaking package while coordinating with stakeholders and partner state agencies. Staff plan to submit the Notice of Proposed Rulemaking to the Office of Administrative Law to start the rulemaking process in late 2024 with a projected board adoption in 2025. Draft regulations can be found at: Regulations for On-Site Treatment and Reuse of Nonpotable Water (SBDDW-22-001) | California State Water Resources Control Board

- **Uniform Statewide Recycling Criteria, Title 22 of California Code of Regulations (Division 4; Chapters 1, 2, and 3)** establishes water quality standards, level of treatment, and use areas for recycled water. Last updated in 2014, the Uniform Statewide Recycling Criteria define limitations for application of recycled water based on level of treatment and specified use, such as landscape and agricultural irrigation, landscape impoundments, industrial or commercial cooling, and golf course irrigation. The level of treatment required in the Uniform Statewide Recycling criteria for approved uses of recycled water depends on the potential for human contact with recycled water. The Uniform Statewide Recycling Criteria classify non-potable recycled water uses based on treatment levels into four categories:
    - Undisinfected secondary recycled water, as defined in California Code of Regulations, Title 22, § 60301.900.
    - Disinfected secondary-23 recycled water, as defined in California Code of Regulations, Title 22, § 60301.225.
    - Disinfected secondary-2.2 recycled water, as defined in California Code of Regulations, Title 22, § 60301.220.
    - Disinfected tertiary recycled water, as defined in California Code of Regulations, Title 22, § 60301.230.

Water Quality Control Plan for the San Francisco/Sacramento-San Joaquin Delta Estuary (Bay-Delta Plan Amendment)

On December 12, 2018, the State Water Board adopted amendments to the Water Quality Control Plan for the San Francisco Bay/Sacramento–San Joaquin Delta Estuary (Bay-Delta Plan) pursuant to Resolution No. 2018-0059, establishing Lower San Joaquin River flow objectives and revised southern Delta salinity objectives. Whether and how these amendments will be implemented and their effect on supply reliability of SFPUC's regional water system has been the subject of litigation and negotiations. Following its adoption by the State Water Resources Control Board, there were over a dozen active lawsuits challenging the Bay-Delta Plan Amendment, including claims that the Bay-Delta Plan Amendment could significantly reduce water available from the Tuolumne River, which is the source of 85 percent of the water for SFPUC's regional water system. In March 2024, the Sacramento County Superior Court ruled in

the State Water Board's favor on all claims by the petitioners. In May 2024, the City and County of San Francisco and other water suppliers filed an appeal on this decision (EKI 2024).

Since 2019, SFPUC has participated in negotiations with the state and other stakeholders to reach a compromise wherein a voluntary agreement could be adopted as an alternative or substitute for the Bay-Delta Plan Amendment that would minimize the impacts to the regional water system. In March 2019, SFPUC submitted a proposed voluntary agreement (Proposed Voluntary Agreement) to the state. On November 9, 2022, SFPUC signed a non-binding MOU with state representatives outlining conceptual deal points for a Tuolumne River Voluntary Agreement. As of this date, the MOU remains in effect, while the Proposed Voluntary Agreement is currently undergoing review and evaluation by the State Water Board (EKI 2024).

Given the ongoing negotiations, litigation, and regulatory proceedings surrounding the Bay-Delta Plan Amendment, the SFPUC uses three scenarios to analyze water supply and demand in its Water Supply Assessments (EKI 2024). These scenarios, which account for the uncertainty regarding the extent and timing of the Bay-Delta Plan Amendment's implementation, were used in the Baylands Water Supply Assessment as recommended by SFPUC:

- Scenario 1 (Implementation of the Bay-Delta Plan Amendment)
- Scenario 2 (Without Implementation of the Bay-Delta Plan Amendment or the Proposed Voluntary Agreement
- Scenario 3 (Implementation of the Proposed Voluntary Agreement

Wastewater and Stormwater

State Water Resources Control Board Statewide General Waste Discharge Requirements for Sanitary Sewer Systems

The Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (State Water Resources Control Board Order No 2006-0003-DWQ) applies to sanitary sewer systems that are greater than one mile long and collect or convey untreated or partially treated wastewater to a publicly owned treatment facility. The goal of Order No. 2006-0003 is to provide a consistent state-wide approach for reducing sanitary sewer overflows and accidental releases of untreated or partially treated wastewater from sanitary sewer systems by requiring that:

- In the event of a sanitary sewer overflow, all feasible steps must be taken to control the released volume and prevent untreated wastewater from entering storm drains, creeks, etc.
- If a sanitary sewer overflow occurs, it must be reported to the State Water Resources Control Board using an online reporting system developed by the State Water Board.
- All publicly owned collection system agencies with more than 1 mile of sewer pipe in the state must develop a Sewer System Management Plan, which must be updated every 5 years.

The State Water Resources Control Board adopted the Statewide Sanitary Sewer Systems General Order on June 5, 2023. The new includes new requirements related to spill prevention and reporting and would increase the regulatory scope such as discretionary regulation of privately owned sanitary sewer systems or sewer laterals and prohibition of any sanitary sewer overflows from a system, as opposed to only those that reach Waters of the United States and those that create a nuisance.

Water Reclamation Requirements for Recycled Water Use General Order

The State Water Board adopted Water Reclamation Requirements for Recycled Water Use (Order WQ 2016-0068-DDW) on June 7, 2016 (General Order). The General Order replaces 2014-0090-DWQ General Waste Discharge Requirements for Recycled Water Use. The General Order establishes standard conditions for recycled water use and conditionally delegates authority to an Administrator to manage a Water Recycling Program and issue Water Recycling Permits to recycled water users. Only treated municipal wastewater for non-potable uses can be permitted, such as landscape irrigation, crop irrigation, dust control, industrial/commercial cooling, decorative fountains, etc. Potable reuse activities are not authorized under this General Order.

Solid Waste Management

California Integrated Waste Management Act of 1989 (Assembly Bill [AB] 939)

AB 939 redefined solid waste management in terms of both objectives and planning responsibilities for local jurisdictions and the state. The Act was adopted to reduce the volume and toxicity of solid waste that is landfilled and incinerated by requiring local governments to prepare and implement plans to improve the management of waste resources. AB 939 required each of the cities and unincorporated portions of the counties to divert a minimum of 25 percent of the solid waste sent to landfills by 1995, and 50 percent by the year 2000 through source reduction, recycling and composting, and environmentally safe landfill disposal and transformation. This law established the California Integrated Waste Management Board, later the California Department of Resources Recycling and Recovery (CalRecycle).

SB 1016 Solid Waste Disposal Measurement Act (2008)

CalRecycle introduced a new diversion measurement system pursuant to SB 1016 based on a City's population and disposal tons to calculate a per capita disposal rate expressed in pounds per person per day. SB 1016 builds on AB 939 compliance requirements by implementing a simplified measure of the City's recycling performance. Under this measurement system, a city needs to annually dispose of an amount equal to or less than its "50 percent equivalent per capita disposal target" calculated by CalRecycle.

Since the implementation of the revised diversion measurement system under SB 1016, the City of Brisbane has achieved compliance by remaining below the calculated per capita disposal

target set by the state. According to CalRecycle, the City of Brisbane has a per resident disposal rate target of 16.9 pounds/person/day (PPD) and a per employee disposal rate target of 7.9 PPD. The most recent approved data (2015) from CalRecycle for the City of Brisbane identified the annual per capita disposal rate per resident as 6.7 PPD. The annual per capita disposal rate per employee was 4.2 (CalRecycle 2022c).

Other State Solid Waste Management Statutes

Other solid waste management statutes include the following:

- **AB 1327 California Solid Waste Reuse and Recycling Act (1991)** requires adequate areas for collecting and loading recyclable materials within a project site.
- **AB 1826 Mandatory Commercial Organics Recycling (2014)** requires local governments to establish organic waste recycling programs. In addition, it requires businesses and multifamily residences of at least five units that generate four cubic yards or more of solid waste per week to arrange for organic waste recycling services.
- **AB 1594 Green Material Disposal (2014)** established that effective January 1, 2020, jurisdictions can no longer count green material used as alternative daily cover (ADC) at landfills toward their recycling goals. They are required to develop plans to divert green material from landfills.
- **Senate Bill 1383 Short-Lived Climate Pollutants: Organic (2016)** is a state-wide effort to reduce emissions of short-lived climate pollutants. Specifically, the law sets the following targets: (1) reduce state-wide disposal of organic waste by 50 percent by January 1, 2020, and by 75 percent by January 1, 2025 (based on 2014 levels), and (2) rescue at least 20 percent of currently disposed of edible food for human consumption by 2025.

California Occupational Safety and Health Requirements for Excavation

The California Occupational Safety and Health Regulations outline specific requirements for any person planning to conduct excavation. The excavator is required to notify the Underground Service Alert at least 2 days prior to excavation and to delineate the area to be excavated. Any operator of a subsurface utility in the area who receives notification must locate and field mark the approximate location of any utilities that could be affected by the excavation. Utilities in conflict with the excavation must be exposed by digging with hand tools prior to the use of any power equipment (Underground Service Alert, undated).

California Public Utilities Commission

The California Public Utilities Commission (CPUC) has constitutional authority to regulate privately owned public utilities, including electric, natural gas, telecommunications, water, railroad, rail transit, and passenger transportation companies. As part of its mission, the CPUC

"… ensures the provision of safe, reliable utility service and infrastructure at reasonable rates" to its consumers including a commitment to enhancement of the environment and a "healthy California economy." The CPUC regulates utility services and promotes innovation as well as a competitive marketplace for services (CPUC 2007).

c. Regional Plans, Policies, and Regulations

SFPUC Alternative Water Supply Planning Program

SFPUC's Alternative Water Supply Planning Program is designed to address future long-term water supply reliability challenges and vulnerabilities and identify water supply projects that increase the dry-year reliability of regional water system supplies to avoid a long-term water supply gap. The alternative water supply plan identifies a diverse suite of non-traditional water sources and means of leveraging regional partnerships to meet retail and wholesale customer needs through 2045.

Wholesale Water Supply Agreement

The Amended and Restated Water Supply Agreement Between the City and County of San Francisco and Wholesale Customers in Alameda County, San Mateo County, and Santa Clara County (Water Supply Agreement)[348] is an agreement between the City and County of San Francisco and its wholesale customers (including the City of Brisbane and GVMID) that defines the water supply availability for the regional water system. The Water Supply Agreement introductory statement acknowledges that both San Francisco and its wholesale customers share a commitment to the regional water system by providing a reliable supply of high-quality water at a fair price in an environmentally sustainable manner. The Water Supply Agreement's term was established July 1, 2009, for a 25-year period that is set to expire on June 30, 2034, unless an extension is granted. The text of the Water Supply Agreement is included as an appendix to the Baylands Water Supply Assessment (Draft EIR Appendix P).

The Bay Area Water Supply and Conservation Agency coordinates water conservation, supply, and recycling activities for its agencies; and acquires water to make available to other agencies on a wholesale basis. The Water Supply Agreement provides a 184-mgd supply assurance to the SFPUC's wholesale customers collectively. The supply is broken down further into contractual allocations to the various wholesale customers. The contractual allocation of the SFPUC supply (referred to as an "Individual Supply Guarantee") for Cal Water is 35.68 mgd (39,993 acre-feet per year), which is shared among its South San Francisco, Mid-Peninsula, and Bear Gulch

[348] SFPUC, *Amended and Restated Water Supply Agreement between the City and County of San Francisco and Wholesale Customers in Alameda County, San Mateo and Santa Clara County*. November 2018.

districts. Brisbane's Individual Supply Guarantee of 0.98 mgd (1,098.5 acre-feet per year) is shared by the GVMID and Brisbane Water District.

California Water Company

Water Shortage Contingency Plan

California Water Company's Water Shortage Contingency Plan applies to its regulated ratemaking areas throughout California. The plan, which has been approved by the California Public Utilities Commission, establishes four stages of mandatory restrictions of water use, which may be implemented if:

a. Water supplies are projected to be insufficient to meet normal customer demand by Cal Water; or

b. A water supply shortage or threatened shortage exists; or

c. Water supplies are curtailed by a wholesale water supplier; or

d. Directed to do so under a duly adopted emergency regulation by the Public Utilities Commission or other authorized government agency.

Wasteful Uses of Water Prohibited. Except where necessary to address an immediate health or safety need or to comply with a term or condition in a permit issued by a state or federal agency, customers are prohibited, at all times, from using potable water for specified non-essential, wasteful uses.

Stage 1 Water Shortage. A Stage 1 Water Shortage occurs when Cal Water, the Public Utilities Commission, a wholesale water supplier (e.g., SFPUC), or other authorized government agency determines that measures are needed to reduce water consumption by customers served by public water suppliers. Stage 1 includes restrictions that limit use of potable water for irrigation to 3 days per week and only between the hours of 6:00 p.m. and 8:00 a.m.

Stage 2 Water Shortage. A Stage 2 Water Shortage occurs when the Stage 1 Water Shortage restrictions are deemed insufficient to achieve identified water use goals established by Cal Water, the Public Utilities Commission, a wholesale water supplier (e.g., SFPUC), or other authorized government agency. In addition to requirements for a Stage 1 water shortage, customers are prohibited from the following:

- Application of potable water to driveways and sidewalks
- Use of potable water in a water feature, except where the water is part of a recirculating system
- Application of potable water to outdoor landscapes during and within forty-eight (48) hours after measurable rainfall

- Serving of drinking water other than upon request in eating or drinking establishments, including but not limited to restaurants, hotels, cafes, cafeterias, bars, or other public places where food or drink are served and/or purchased
- Irrigation of ornamental landscapes within public street medians
- Irrigation outside of newly constructed homes and buildings with potable water in a manner inconsistent with regulations or other requirements established by the California Building Standards Commission and the Department of Housing and Community Development
- Filling or re-filling ornamental lakes or ponds with potable water is prohibited, except to the extent needed to sustain aquatic life, provided that such animals are of significant value and have been actively managed within the water feature prior to the implementation of any staged mandatory restrictions of water use as described in this Rule
- Other duly adopted restrictions on the use of potable water as prescribed from time to time by the Commission or other authorized government agencies

In addition, operators of hotels and motels are required to provide guests with the option of choosing not to have towels and linens laundered daily. Hotel and motels are also required to prominently display notice of this option in each guest room using clear and easily understood language.

Stage 3 Water Shortage. A Stage 3 Water Shortage occurs when Stage 2 Water Shortage restrictions are deemed insufficient to achieve identified water use goals established by Cal Water, the Public Utilities Commission, a wholesale water supplier (e.g., SFPUC), or other authorized government agency. In addition to Stage 2 restriction, the following additional restrictions would apply.

- Use of potable water for irrigation would be reduced to 2 days per week and only between the hours of 6:00 p.m. and 8:00 a.m.
- Use of potable water for street cleaning with trucks, except for initial wash-down for construction purposes (if street sweeping is not feasible).
- Use of potable water for construction purposes, such as consolidation of backfill, dust control, or other uses unless no other source of water or other method can be used.

Stage 4 Water Shortage. A Stage 4 Water Shortage occurs when the Stage 3 Water Shortage restrictions are deemed insufficient to achieve identified water use goals established by Cal Water, the Public Utilities Commission, a wholesale water supplier (e.g., SFPUC), or other authorized government agency. In addition to Stage 2 restriction, the following additional restrictions would apply.

- Irrigating ornamental landscape with potable water is prohibited, except when a hand-held bucket or a similar container, or a continuously monitored hose which is fitted with an automatic shut-off nozzle or device attached to it that causes it to cease dispensing water immediately when not in use or monitored is used to maintain vegetation, including trees and shrubs.
- Stage 3 exceptions to potable water use in eating and drinking establishments, for street cleaning with trucks, and for construction purposes would be eliminated.

Bay Area Regional Water Supply Reliability Study

Cal Water recently completed the "Bay Area Regional Water Supply Reliability Study," which employs integrated resource planning practices to create a long-term supply reliability strategy through 2050 for the three Peninsula Districts (Cal Water 2022). The study creates long-term strategies to address a wide range of water supply challenges including climate change, new regulatory requirements (e.g., the Bay-Delta Plan Amendment), and potential growth in demands due to new development. The Water Supply Reliability Study explores potential recycled water developments to augment supply in the three Peninsula Districts.

Development Offset Program

In July 2021, Cal Water began developing a Development Offset Program for its three Peninsula Districts to ensure that overall customer demand for water does not exceed available current or future supply under a range of hydrologic conditions, and to ensure the availability of water for residential, commercial, and other purposes for future water use in the three Peninsula Districts.[349]

As described and approved in the June 7, 2022 Advice Letter No. 2453 to the California Public Utilities Commission, the Development Offset Program requires any new residential, commercial, or industrial development within any of the three Peninsula Districts that would increase net demand by more than 50 acre-feet per year to pay a special facilities fee, referred to as a "developer offset fee," of $15,400 per acre-foot of net demand increase.[350] The developer offset fee was calculated based on representative alternative water projects in the Bay Area region, and the anticipated yield of those projects, and will be used to fund accelerated water supply projects and expanded customer conservation programs. The alternative water projects included in the Developer Offset Fee include projects where Cal Water is partnering with the SFPUC as described in SFPUC's Alternative Water Supply Plan.

[349] Cal Water's three Peninsula District share the same SFPUC supply allocation

[350] "Net demand increase" is defined as the expected total potable water use for the development once it is completed, minus the average annual existing potable water use on the property over the previous five years.

The result of this program is that new residential, commercial, and industrial development projects that pay offset fees are considered by Cal Water to result in a net zero increase in potable water demand.

San Mateo County Local Agency Formation Commission Municipal Service Reviews

Under the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000, a Local Agency Formation Commission (LAFCo) evaluates establishment, amendment, or updates of a local agency's spheres of influence (SOIs), in accordance with the following Government Code section:

> **56430. (a)** In order to prepare and to update spheres of influence in accordance with Section 56425, the commission shall conduct a service review of the municipal services provided in the county or other appropriate area designated by the commission. The commission shall include in the area designated for service review the county, the region, the subregion, or any other geographic area as is appropriate for an analysis of the service or services to be reviewed and shall prepare a written statement of its determinations.

The San Mateo Local Agency Formation Commission (LAFCo) is required to conduct periodic reviews of each service provider, and to adopt determinations addressing current service levels and the ability of each agency to continue to provide adequate services into the future. LAFCo completed Municipal Service reviews for the City of Brisbane and Bayshore Sanitary District in September 2015 as part of the North County Cities and Special Districts Municipal Service Review-Sphere of Influence Study.[351]

While LAFCo has approval authority to detach the Baylands, Sierra Point, and Beatty areas from the City's service area for water because Cal Water is a private company, approval authority to extend its service area into Brisbane rests with the California Public Utilities Commission rather than LAFCo.

Countywide Integrated Waste Management Plan

The San Mateo County Office of Sustainability is responsible for preparing and maintaining the Countywide Integrated Waste Management Plan (CIWMP). This plan consists of Source Reduction and Recycling Elements, Household Hazardous Waste Elements, and Non-Disposal Facility Elements of each jurisdiction within the County; the Countywide Siting Element, and the Countywide Integrated Waste Management Summary Plan. The CIWMP addresses waste management conditions and provides an overview of the actions that will be taken to achieve applicable solid waste diversion requirements and to maintain 15 years of landfill disposal capacity.

[351] https://www.smcgov.org/media/71721/download?inline=.

California statute requires the County of San Mateo to review its CIWMP every five years and then report on its adequacy to CalRecycle.

San Francisco Zero Waste Policy

In 2018, San Francisco updated its zero-waste policy to set waste reduction targets of reducing the amount of municipal waste by 15 percent by 2030 and reducing landfill disposal and incineration by 50 percent by 2030.

In addition, San Francisco Ordinance No. 1009, Mandatory Recycling and Composting Ordinance, requires all of San Francisco to separate recyclables, compostables, and trash to be landfilled. Under this ordinance, it is unlawful to mix recyclables, compostables, or trash, or to deposit refuse of one type in a collection container designated for another type of waste.

d. City of Brisbane Plans, Ordinances, and Regulations

General Plan

Chapter IX: Conservation Element

Policy 130: Conserve water resources in the natural environment.

Program 130a: As an ongoing part of land use planning and CEQA analysis, determine whether proposals could affect water resources.

Policy 133: Encourage conservation of domestic water.

Program 138a: Require the use of water conserving fixtures in new construction and remodeling projects.

Program 138b: Encourage the use of water conserving landscape and irrigation systems.

Program 138c: Utilize, if safe and appropriate, recycled water for landscape irrigation and dust control.

Policy 143: Maximize opportunities to recycle solid waste.

Program 143e: In the review of land use development applications, consider design factors pertaining to the storage and disposal of recycling materials.

Program 143f: Consult with refuse disposal contractors or other recycling services on applicable land use development applications regarding the adequacy of the proposed measures.

Policy 146: Require that developers and property owners in undeveloped areas who wish to build on their land provide infrastructure at their own expense, including water, sewer, storm drains and paved streets to City standards.

Chapter X: Community Health and Safety

Policy 213: If new development occurs, require trunk and lateral lines to be installed to City standards.

Program 213a: In conjunction with land use development applications for vacant lands, require studies to determine capacity and design requirements for sanitary sewer services and require infrastructure design and installation to the satisfaction of the City at developer's expense.

Policy 214: Require, as feasible, that all sanitary sewer lines be installed within dedicated public streets.

Policy 215: Sanitary sewer service to undeveloped areas where facilities do not currently exist shall be installed and connected to the City's system at the property owner or developer's expense.

Policy 216: If development occurs, extend City sanitary sewer service to currently undeveloped areas so that all new users within the City Limits are served by the City as legally permissible.

Policy 217: If new development occurs, require storm drain systems to be installed to City standards.

Program 221a: In conjunction with land use development applications for vacant lands, require studies to determine design requirements to collect and remove stormwater from the property or reuse stormwater to benefit the public. Require facilities to be designed and installed to City standards, at developer's expense.

Policy 222: Require that all storm drain lines be installed within dedicated public streets.

Policy 223: Storm drains in undeveloped areas where facilities do not currently exist shall be installed at the property owner or developer's expense.

Policy 224: In conjunction with development applications that place substantial increased demands upon the existing system, require that the system be upgraded or replaced to the satisfaction of the City. Contributions from responsible parties should be proportional to the impact of their projects.

Policy 227: Cooperate with Daly City, responsible property owners, and responsible agencies to develop plans to improve the storm facilities on Bayshore Boulevard to relieve flooding.

Chapter XII: Policies and Programs by Subarea

Policy BL.1: Development within the Baylands Subarea shall be subject to the City's approval of a single specific plan for the entirety of the Baylands Subarea and a development agreement that is consistent with General Plan policies, incorporates all applicable EIR mitigation measures, and is consistent with the following standards:

- A reliable water supply approved by the City of Brisbane to support proposed uses within the Baylands shall be secured prior to site development.
- Each increment of development shall be provided with appropriate transportation related and other infrastructure, facilities, and site amenities as determined by the City. Such transportation related and other infrastructure, facilities, and site amenities (e.g., parks, open space preservation, habitat enhancement) shall be provided at the developer's cost.

Municipal Code

Chapter 15.75, Recycling and Diversion of Debris from Construction and Demolition

Chapter 15.75 of the Brisbane Municipal Code requires that a minimum of sixty-five percent (65 percent) of the nonhazardous construction and/or demolition waste and one hundred percent (100 percent) of inert solid material associated with excavations and land clearing operations, including trees, stumps, and rocks be recycled and/or salvaged for re-use. This standard is to be achieved in accordance with either a waste management plan or by an approved waste management company, as outlined below:

A. Waste Management Plan. Submit a waste management plan in conformance with items 1 through 5. The construction waste management plan shall be updated as necessary and shall be available during construction for examination by the city.
    1. Identify the construction and demolition waste materials to be diverted from disposal by efficient usage, recycling, reuse on the project or salvage for future use or sale. Priority is to be given to salvage over recycling in the plan.
    2. Specify if construction and demolition waste materials will be sorted on-site (source-separated) or bulk mixed (single stream).
    3. Identify diversion facilities where construction and demolition waste materials collected will be taken.
    4. Identify construction methods employed to reduce the amount of construction and demolition waste generated.
    5. Specify the amount of construction and demolition waste materials diverted shall be calculated by weight or volume, but not by both.

B. Waste Management Company. Utilize a waste management company, approved by the city, which can provide verifiable documentation that the percentage of construction and demolition waste material diverted from the landfill complies with the minimum recycling and/or salvage for re-use percentages listed above in this section.

Chapter 8.41, Water Conservation

Municipal Code Chapter 8.41 establishes standards and procedures for water conservation to ensure the maximum beneficial use of city water supplies; enable implementation of the city's responsive actions to drought conditions and/or water supply shortages; facilitate compliance with requirements for voluntary or mandatory reductions during water shortages; ensure sufficient water supplies to meet the basic needs of human consumption, sanitation, and fire protection; and protect the health, safety, welfare, and economic vitality of the City's customers.

City of Brisbane Water Shortage Contingency Plan

The City's Water Shortage Contingency Plan (WSCP) is a plan in response to anticipated future dry-year shortfalls that systematically identifies ways in which the City can respond effectively and efficiently in the event of a water shortage emergency. The City/GVMID collectively serves approximately 2,100 accounts and delivers 0.59 mgd of water. The guiding principle of the WSCP aims to eliminate water waste and prioritize reducing non-essential water uses, such as landscape irrigation and other discretionary outdoor water use. The overall reduction goals in the WSCP are established for six drought stages and address water demand reductions of up to 40 percent (City of Brisbane/Guadalupe Valley Municipal Improvement District 2023, EKI Environment & Water 2024). The WSCP identifies Shortage Response Actions associated with each drought stage. In the event of a water shortage, the Project would be required to comply with all applicable Shortage Response Actions. Specific actions that are relevant to the analysis of Project utilities include:

- Stage 1
    - Shortage Response Action 13. Use recycled water for construction purposes, if available.
    - Shortage Response Action 14. No new, non-residential water meters may be issued unless the Director determines that such issuance will not impede the City's compliance with the required water use reductions.
- Stage 2
    - Shortage Response Action 4. Prohibit use of potable water for construction and dust control.

4.16.4 RELEVANT SPECIFIC PLAN PROVISIONS

a. Potable and Recycled Water

Potable and recycled water supply for the Baylands site is proposed to be provided by Cal Water through its "Bayshore District" using a combination of (1) potable water purchased from the SFPUC supplemented by five existing off-site groundwater wells and (2) recycled water provided by a water recycling facility (WRF) to be constructed within the Baylands. Cal Water potable supplies would be delivered to the Brisbane site via existing turnouts from the SFPUC regional water system.

The Baylands WRF would reduce total potable water demand by providing recycled water for landscape irrigation and non-potable uses within non-residential buildings. Recycled water generated by the WRF would be distributed to uses by way of a separate piping system from the potable water network to prevent unintended use of recycled water and to avoid contamination of the potable water system. Activated sludge from the WRF and sewage that does not go through the WRF would be routed into the SFPUC sewer system at the north end of the Baylands.

b. Wastewater

The Baylands WRF would treat approximately 1.73 mgd of sewage from the Baylands site to generate a maximum of 1.0 mgd of recycled water. The approximately 0.73 mgd would be discharged to the SFPUC sewer system for treatment at the Southeast Treatment Plant. Sewage collection services within the Baylands not associated with the Baylands WRF would be provided by the Bayshore Sanitary District (BSD), which owns and operates wastewater collection facilities within the Brisbane city limits. Proposed Baylands sewer system improvements are illustrated in **Figure 3-46**. To accommodate differential settlement at the interface between proposed structures and sanitary sewer lateral service connection lines, flexible connections with settlement vaults are proposed to be provided to avoid shearing of utility infrastructure.

Sanitary sewage generated on-site would be routed to a proposed WRF for extraction and treatment of non-potable water to reduce demands for potable water on-site.

c. Electrical Facilities

The Specific Plan proposes that electric power for construction and future uses continue to be provided by Pacific Gas and Electric Company (PG&E) with energy resource purchased

through Peninsula Clean Energy.[352] Proposed Baylands energy improvements are illustrated in **Figure 3-49** and **Figure 3-50**, and include:

- Undergrounding of existing overhead lines and construction of new on-site electrical supply lines underground in joint trenches with communications infrastructure;
- 92,445 MWh (megawatt-hours) of on-site solar energy generation within a 55-acre solar farm as well as building-mounted and parking lot solar panels;
- A 250-megawatt (MW) battery storage facility, including connection to and improvements at the existing PG&E Martin Substation across Bayshore Boulevard from the Baylands;
- 44,055 MW of battery storage capacity distributed across the site within sustainable infrastructure, residential, and commercial areas; and
- A 2-acre on-site switching substation.

d. Solid Waste

The Specific Plan sets the following standards for construction waste generation and diversion:

1. Total construction waste generated from new construction activities shall not exceed 7.5 pounds of waste/square feet of new development.
2. For both residential and non-residential covered projects, recycle and/or salvage for re-use shall include a minimum of 65 percent of the nonhazardous construction and/or demolition waste.
3. Source 100 percent of recycled soils on-site.

The Specific Plan also sets the following standards for ongoing post-construction waste generation and diversion:

1. Information regarding recycling, reuse, minimization, management, container storage, and pickup operations shall be provided to new owners, lessees and renters by the Master Property Owners' Association (MPOA) or a designated residential or commercial property owners' association designated by the MPOA (collectively, HOA). HOAs shall also include with this information regarding waste segregation requirements including at minimum segregation of recyclable and composting (green waste).
2. The HOAs shall also provide on such websites and in designated public areas information regarding the management of wastes requiring special handling, such as household hazardous waste, universal wastes, paints, compact fluorescent bulbs, and electronics.

[352] Peninsula Clean Energy is a community-controlled, not-for-profit, joint powers agency formed as a Community Choice Aggregation program by San Mateo County and all 20 of its cities and towns in 2016 and joined by the City of Los Banos in 2020.

3. The MPOA shall encourage food retailers to use low-waste food packaging by requiring website training and review of online educational materials for new food vendors, including but not limited to retail grocery stores and restaurants, farmers' markets and food trucks, and in conjunction with events and gatherings.
4. The MPOA or its designees shall meet no less than annually with the refuse and recycling collection companies to identify items that cannot be recycled under current conditions and update educational information on websites to encourage alternatives to landfilling such as encouraging customers to recycle and reuse their own plastic bags.

The MPOA shall require the installation and use of pet waste collection systems, including bags and waste containers, in designated outdoor pet areas and on trail segments allowing pets. Pet wastes shall be segregated for pickup, and to the extent feasible diverted from landfills if feasible alternatives exist, such as disposal at a methane recovery or other treatment facility.

4.16.5 SIGNIFICANCE CRITERIA

The following criteria were used to determine the significance of utilities, service systems, and water supply impacts.

Threshold UTL-1: **The Baylands Specific Plan would cause a significant impact if water supplies available to California Water Service Company's South San Francisco District would be insufficient to serve buildout of the Baylands Specific Plan in addition to existing and planned future development within California Water Service Company's South San Francisco District as it is proposed to be expanded into Brisbane during normal, dry, and multiple dry years throughout Baylands development and at projected buildout.**

Threshold UTL-2: **The Baylands Specific Plan would cause a significant impact if the physical environmental effects associated with construction, relocation, or improvement of new or expanded water, wastewater, energy, or telecommunications facilities would cause or contribute to one or more significant impacts not identified elsewhere in this EIR.[353]**

[353] Analysis of the physical environmental effects associated with construction, relocation, or improvement of new or expanded stormwater drainage facilities is provided in Section 4.14, *Hydrology and Water Quality*, Impact HWQ-1. Analysis of physical environmental effects associated with construction, relocation, or improvement of new or expanded energy generation, storage, and distribution is provided in Section 4.11, *Energy Resources*, Impact EN-1.

Threshold UTL-3: The Baylands Specific Plan would cause a significant impact if it would not minimize solid waste generation and maximize diversion of solid wastes from landfills and incinerators set forth in applicable solid waste management and reduction statutes, regulations, plans, policies, and strategies.

Threshold UTL-4: The Baylands Specific Plan would cause a significant impact if substantial adverse physical environment effects would be associated with new or expanded solid waste facilities due to:

- **Generating solid waste in excess of the daily capacity of local infrastructure and area landfills to manage; or**
- **Substantially reducing the life expectancy of the landfill(s) to which Specific Plan-generated solid waste would be delivered.**

4.16.6 PROJECT IMPACTS AND MITIGATION MEASURES

a. Threshold UTL-1: Water Supply

Methodology for Determining Significance

The analysis of the Specific Plan's impact related to water supply identifies the increased demand of water supply that would be generated by buildout of the Specific Plan and the capacity of Cal Water to meet the current and planned water demands within its expanded service area, including the demands associated with the Baylands, Beatty, and Sierra Point areas.

Water supply was evaluated through a water supply assessment (Appendix P) addressing whether Cal Water would have sufficient water supply to meet the current and projected water demands within its expanded service area to ensure that water is available for the Baylands, Beatty, and Sierra Point areas during normal years, a single dry year, and multiple dry years over a 20-year future projection.

If water supplies available to Cal Water's South San Francisco District would be insufficient to serve projected demands of the Baylands, Beatty, and Sierra Point areas, including buildout of the Specific Plan in addition to existing and planned future development within Cal Water's South San Francisco District during normal, dry, and multiple dry years throughout Baylands development and at projected buildout, a significant impact would result.

Impact Assessment

As stated in the Baylands Water Supply Assessment, the increased potable water demand for the Baylands Specific Plan and future projects within Sierra Point would be offset by Cal

Water's Development Offset Program and are therefore considered by Cal Water to have a zero net increase. The Development Offset Fee Program provides funds to accelerate water supply projects and expand customer conservation programs. Water projects included in the offset fee program include projects Cal Water is partnering with the SFPUC as described in SFPUC's Alternative Water Supply Plan (SFPUC 2024c), as well as other projects that would increase local water supply. SFPUC alternative water supply projects include supply projects (surface water, purified water, groundwater, or recycled water), storage projects, and conveyance projects.

- **Supply Projects**
    - Surface water supply projects include supplies that are outside of the SFPUC's existing supplies and may also include brackish water. Surface water supply projects would rely on a combination of transfers, storage, and conveyance to make the supply available within the SFPUC service area.
    - Purified water projects are those that generate potable water through the advanced treatment of wastewater either through indirect potable or direct potable reuse. Indirect potable reuse projects are those where purified water is blended in surface water reservoirs (referred to as reservoir augmentation) or injected into groundwater basins (groundwater recharge) before being added to distribution facilities. Direct potable reuse projects are those where purified water is added directly to the distribution system. This may be done through raw water augmentation, which is the planned placement of purified water into a system of pipelines that deliver raw water to a drinking water treatment plant, or treated water augmentation, which is the planned placement of purified water into the water distribution system.
    - Groundwater supply programs focus on management of storage and recovery in dry years by offsetting groundwater use in normal or wet years with available surface water supplies or, in the case of non-potable use of groundwater, with alternative supplies such as recycled water. The groundwater that is offset accumulates, or is stored, in the basin and then recovered for use as a potable supply in future dry years when surface water supplies are limited.
    - Recycled water that has been treated to be safe for a variety of non-potable uses are aimed at (1) increasing potable water supplies by increasing potable water supplies to replace potable water use for non-potable water demand (e.g., landscape irrigation) or (2) being blended in groundwater basins as part of an indirect potable use project.

- **Storage Projects**

  Due to extreme changes from severe weather patterns and their effect on the timing of water availability, the Alternative Water Supply Plan recognizes the importance of having sufficient storage for use in dry years. Storage options include:

  - Surface water storage by expanding existing facilities or building new reservoirs.
  - Groundwater storage, including sustainably managing groundwater aquifers as storage for future dry-year reliability through storage and recovery projects, as described above, and by percolation or injection of water supply into the aquifer for future recovery.

- **Conveyance Projects** would connect existing or new facilities and enable deliveries of water. In addition to evaluating options for building new infrastructure, the alternative water supply program considers how existing facilities that are part of the SFPUC regional water system and facilities that are owned by other agencies could provide efficient and cost-effective connections and deliveries.

As indicated in **Table 4.16-2**, the estimated offset amount for the Specific Plan is 1,146.3 acre-feet per year. Cal Water will verify compliance with the Development Offset Program (i.e., ensure that all payments for offsets are completed) prior to establishing a water service connection.

Table 4.16-4 shows the projected water demands for the South San Francisco District inclusive of estimated Specific Plan water demands, as well as other known developments and existing SFPUC or City customers within the Cal Water service area expansion that are exempt from the Development Offset Program. As indicated in the Baylands Water Supply Assessment, with the implementation of Cal Water's Development Offset Program, the Specific Plan and other proposed development projects within Sierra Point would not increase the demand on the South San Francisco District's water supplies.

The projected water supply and demands for Cal Water's three Peninsula Districts for normal year, single dry-year, and multiple dry-year hydrologic conditions are shown in **Table 4.16-5**, **Table 4.16-6**, and **Table 4.16-7**, respectively. The water supply conditions presented in these tables address a worst-case scenario wherein the Bay-Delta Plan is implemented as written. Anticipated dry-year supply estimates presented are based on the delivery estimates provided by Cal Water as part of its 2020 Urban Water Management Plan (UWMP).

As indicated in **Table 4.16-5**, under normal year conditions, no shortfalls relative to total demands would occur.

Table 4.16-4: Projected Future Potable Water Demand for the Cal Water/South San Francisco District and Proposed Service Area Expansion

	Projected Annual Water Demand (in acre-feet)				
	2025	**2030**	**2035**	**2040**	**2045**
Existing South San Francisco District					
SSF District 2020 UWMP[a]	7,016	6,956	7,108	7,473	7,896
Other Planned Development[b]	43	82	82	82	82
Proposed Service Area Expansion					
Baylands Specific Plan		In accordance with Cal Water's Development Offset Program, Specific Plan development would not result in a net increase in water demand.			
Active Customers within Specific Plan Area[c]	21	21	21	2.7	2.7
Active Customers outside of Specific Plan Area[d]	122	122	122	122	122
Other Planned Development		Planned development subject to Cal Water's Development Offset Program would not result in a net increase in water demand.			
TOTAL WATER DEMAND	**7,202**	**7,180**	**7,332**	**7,680**	**8,103**

SOURCE: EKI Environment & Water, *Water Supply Assessment for the Baylands Specific Plan*, January 2025.

ABBREVIATIONS: SSF = South San Francisco; UWMP = Urban Water Management Plan

NOTES:

a. Water demand projections for the SSF District were updated in 2021. Projected demands have decreased by 527 AFY relative to those reported in the 2020 UWMP because the Southline Specific Plan Project is now expected to comply with Cal Water's Development Offset Program and will not result in a net increase in demands.
b. Demands for other known developments that are not subject to Cal Water's Development Offset Program within the SSF District can be found in Appendix C of the Water Supply Assessment.
c. This includes existing water users currently served by the City of Brisbane and SFPUC that are located within the Specific Plan area and will either be replaced by the Specific Plan or remain active within the Specific Plan area upon full buildout.
d. This includes existing water users currently served by the City and SFPUC that are located outside of the Specific Plan area and will therefore not be replaced by the 2025 Specific Plan project.

Table 4.16-5: Projected Normal Year Water Supply and Demand

	Projected Normal Year Water Demand (in acre-feet)				
	2025	**2030**	**2035**	**2040**	**2045**
Total Normal Year Supply (All Districts)[a]	42,367	42,367	42,367	42,367	42,367
Total Normal Year Demand[b]					
Existing South San Francisco District	7,016	6,956	7,108	7,473	7,896
Mid-Peninsula District	14,418	14,530	14,786	14,977	15,279
Bear Gulch District	12,796	12,699	12,730	12,730	12,694
Other Planned Development[c]	537	617	617	617	617
Proposed Service Area Expansion					
Baylands Specific Plan		In accordance with Cal Water's Development Offset Program, Specific Plan development would not result in a net increase in water demand.			
Active Customers within Specific Plan Area[d]	21	21	21	2.7	2.7
Active Customers outside of Specific Plan Area[e]	122	122	122	122	122
Other Planned Development		In accordance with Cal Water's Development Offset Program, Specific Plan development would not result in a net increase in water demand.			
Total Water Demand	**34,910**	**34,944**	**35,383**	**35,866**	**36,610**
SUPPLY SHORTFALL (% of Demand)	**None**	**None**	**None**	**None**	**None**

SOURCE: EKI Environment & Water, *Water Supply Assessment for the Baylands Specific Plan*, January 2025.

NOTES:

a. Projected supply is assumed equal to the supplies available for all three districts during normal hydrologic years, which includes 840 afy from the Bear Gulch Reservoir, 1,534 afy from South San Francisco wells, and Cal Water's Individual Supply Guarantee of 39,993 AFY from SFPUC, which is shared among Cal Water's three Peninsula Districts.
b. Water demand projections for the SSF District were updated in 2021. Projected demands have decreased by 527 afy relative to those reported in the 2020 UWMP because the Southline Specific Plan Project is now expected to comply with Cal Water's Development Offset Program and will not result in a net increase in demands.
c. Demands for other known developments that are not subject to Cal Water's Development Offset Program within the SSF District can be found in Appendix C of the Water Supply Assessment.
d. This includes existing water users currently served by the City of Brisbane and SFPUC that are located within the Specific Plan area and will either be replaced by the Specific Plan or remain active within the Specific Plan area upon full buildout.
e. This includes existing water users currently served by the City and SFPUC that are located outside of the Specific Plan area and will therefore not be replaced by the 2025 Specific Plan project.

During single dry years, assuming implementation of the Bay-Delta Plan Amendment, the annual supply for the three Peninsula Districts' service areas will be reduced to 21,039 acre-feet per year by 2045. Supply shortfalls relative to total demands during single dry years are estimated to range between 35 percent in 2025 and 44 percent in 2045 (see **Table 4.16-6**).

Table 4.16-6: Projected Single Dry Year Water Supply and Demand with Implementation of the Bay-Delta Plan Amendment

	Projected Single Dry Year Water Demand (in acre-feet)				
	2025	**2030**	**2035**	**2040**	**2045**
Total Normal Year Supply (All Districts)[a]	23,580	23,546	23,835	23,809	21,039
Total Normal Year Demand[b]					
Existing South San Francisco District	7,304	7,240	7,398	7,777	8,216
Mid-Peninsula District	14,797	14,908	15,168	15,359	15,662
Bear Gulch District	13,354	13,253	13,285	13,228	13,248
Other Planned Development[c]	537	617	617	617	617
Proposed Service Area Expansion					
Baylands Specific Plan[d]		Included in District Demands after Implementation of Development Offset Program.			
Active Customers within Specific Plan Area[e]	21	21	21	2.7	2.7
Active Customers outside of Specific Plan Area[f]	122	122	122	122	122
Other Planned Development[g]		Included in District Demands after Implementation of Development Offset Program.			
Total Water Demand	**36,135**	**36,160**	**36,610**	**37,105**	**37,867**
SUPPLY SHORTFALL (% of Demand)	**35%**	**35%**	**35%**	**36%**	**44%**

SOURCE: EKI Environment & Water, *Water Supply Assessment for the Baylands Specific Plan*, January 2025.

NOTES:

a. Projected supply is assumed equal to the supplies available for all three districts during normal hydrologic years, which includes 840 afy from the Bear Gulch Reservoir, 1,534 afy from South San Francisco wells, and Cal Water's Individual Supply Guarantee of 39,993 afy from SFPUC, which is shared among Cal Water's three Peninsula Districts.
b. Water demand projections for the SSF District were updated in 2021. Projected demands have decreased by 527 afy relative to those reported in the 2020 UWMP because the Southline Specific Plan Project is now expected to comply with Cal Water's Development Offset Program and will not result in a net increase in demands.
c. Demands for other known developments that are not subject to Cal Water's Development Offset Program within the SSF District can be found in Appendix C of the Water Supply Assessment.
d. In accordance with Cal Water's Development Offset Program, the Specific Plan will not result in a net increase in demands.
e. This includes existing water users currently served by the City of Brisbane and SFPUC that are located within the Specific Plan area and will either be replaced by the Specific Plan or remain active within the Specific Plan area upon full buildout.
f. This includes existing water users currently served by the City and SFPUC that are located outside of the Specific Plan area and will therefore not be replaced by the 2025 Specific Plan project.
g. In accordance with Cal Water's Development Offset Program, planned developments within Sierra Point will not result in a net increase in demands.

During multiple dry years, Cal Water estimates that annual supply for its three Peninsula Districts will be reduced to 23,615 acre-feet in 2025 during the first year of a drought, and 20,492 acre-feet in 2025 in the second, third, fourth, and fifth years of drought, assuming implementation of the Bay-Delta Plan Amendment. Cal Water further estimates that in 2045, annual supply will be reduced to 20,954 acre-feet during the first three years of a drought, and 18,061 afy in the fourth and fifth years of drought. Supply shortfalls relative to total demands are estimated to range between 36 percent during the first year of a drought in 2025 to 53 percent during the fifth year of a drought in 2045 (see **Table 4.16-7**).

Table 4.16-7: Projected Multiple Dry Years Water Supply and Demand with Implementation of the Bay-Delta Plan Amendment

Year	Multiple Dry Year[a]	Water Demand						TOTAL WATER SUPPLY[h]	TOTAL WATER DEMAND	Supply Shortfall (% of Demand)
		Existing Service Area		Proposed Expansion Area						
		Cal Water Peninsula Districts[b]	Other Planned Development[c]	Baylands Specific Plan[d]	Active Customers within Specific Plan[e]	Active Customers outside Specific Plan[f]	Other Planned Development Projects[g]			
2025	1	36,212	537	—	21	122	—	**23,615**	**36,892**	**36%**
	2	36,212	537	—	21	122	—	**20,492**	**36,892**	**44%**
	3	36,212	537	—	21	122	—	**20,492**	**36,892**	**44%**
	4	36,212	537	—	21	122	—	**20,492**	**36,892**	**44%**
	5	36,212	537	—	21	122	—	**20,492**	**36,892**	**44%**
2030	1	36,154	617	(e)	21	122	(h)	**23,483**	**36,913**	**36%**
	2	36,154	617	(e)	21	122	(h)	**20,383**	**36,913**	**45%**
	3	36,154	617	(e)	21	122	(h)	**20,383**	**36,913**	**45%**
	4	36,154	617	(e)	21	122	(h)	**20,383**	**36,913**	**45%**
	5	36,154	617	(e)	21	122	(h)	**20,383**	**36,913**	**45%**
2035	1	36,611	617	(e)	21	122	(h)	**23,647**	**37,370**	**37%**
	2	36,611	617	(e)	21	122	(h)	**20,313**	**37,370**	**46%**
	3	36,611	617	(e)	21	122	(h)	**20,313**	**37,370**	**46%**
	4	36,611	617	(e)	21	122	(h)	**20,313**	**37,370**	**46%**
	5	36,611	617	(e)	21	122	(h)	**18,849**	**37,370**	**50%**
2040	1	37,130	617	(e)	3	122	(h)	**23,762**	**37,871**	**37%**
	2	37,130	617	(e)	3	122	(h)	**20,594**	**37,871**	**46%**
	3	37,130	617	(e)	3	122	(h)	**20,594**	**37,871**	**46%**
	4	37,130	617	(e)	3	122	(h)	**18,424**	**37,871**	**51%**
	5	37,130	617	(e)	3	122	(h)	**18,424**	**37,871**	**51%**

Year	Multiple Dry Year[a]	Water Demand						TOTAL WATER SUPPLY[h]	TOTAL WATER DEMAND	Supply Shortfall (% of Demand)
		Existing Service Area		Proposed Expansion Area						
		Cal Water Peninsula Districts[b]	Other Planned Development[c]	Baylands Specific Plan[d]	Active Customers within Specific Plan[e]	Active Customers outside Specific Plan[f]	Other Planned Development Projects[g]			
2045	1	37,904	617	(e)	3	122	(h)	**20,954**	**38,645**	**46%**
	2	37,904	617	(e)	3	122	(h)	**20,954**	**38,645**	**46%**
	3	37,904	617	(e)	3	122	(h)	**20,954**	**38,645**	**46%**
	4	37,904	617	(e)	3	122	(h)	**18,061**	**38,645**	**53%**
	5	37,904	617	(e)	3	122	(h)	**18,061**	**38,645**	**53%**

SOURCE: EKI Environment & Water, *Water Supply Assessment for the Baylands Specific Plan*, January 2025.

a. While Water Supply Assessment regulations require an analysis of a three-year drought scenario, Urban Water Management Plan regulations require a five-year drought scenario (California Water Code §10635).
b. Projected supply is assumed equal to the supplies available for all three districts during normal hydrologic years, which includes 840 afy from the Bear Gulch Reservoir, 1,534 afy from South San Francisco wells, and Cal Water's Individual Supply Guarantee of 39,993 afy from SFPUC, which is shared among Cal Water's three Peninsula Districts. Although local surface water diversions in the Bear Gulch District (and subsequent treatment and use of local surface water) have occurred historically during dry years, the Bear Gulch District conservatively assumes that local surface water supplies will be zero during single dry and multiple dry years over the planning horizon. Projected SFPUC supply is based on dry year allocation projections included in the 2020 UWMPs for each Peninsula District based on the methodology, assumptions, and information used and provided by SFPUC and BAWSCA; however, actual future supply allocations may vary based on actual shortage levels and then-applicable allocation methodology being applied.
c. Cal Water updated its water demand projections for the South San Francisco, Mid-Peninsula, and Bear Gulch Districts in 2021. Projected demands for the South San Francisco District have decreased by 527 afy because the Southline Specific Plan Project is now expected to comply with the Development Offset Program and will not result in a net increase in demands.
d. Demands for other developments that are not subject to the Development Offset Program within the three Peninsula Districts can be found in Appendix C of the Water Supply Assessment.
e. Baylands Specific Plan development will be subject to Cal Water's Development Offset Program and will not result in a net increase in demands.
f. This includes existing water users currently served by the City and SFPUC that are located within the Specific Plan area and will either be replaced by the Specific Plan or will remain active upon full boundary buildout. It is assumed that these customers will be served by Cal Water.
g. This includes existing water users currently served by the City and SFPUC that are located outside of the Specific Plan area and will therefore not be replaced by Specific Plan development. It is assumed that these customers will be served by Cal Water.
h. Proposed development projects within Sierra Point will be subject to Cal Water's Development Offset Program and will not result in a net increase in demands.

The Baylands Water Supply Assessment concludes that available water supplies will be sufficient to meet the demands under normal year hydrologic conditions through 2045, including existing and planned development within Cal Water's three Peninsula Districts and the proposed expansion area in Brisbane encompassing the Baylands, Beatty, and Sierra Point areas for all three Bay-Delta Amendment scenarios.

Under Scenario 1, shortfalls of up to 53 percent are possible in drought periods representing the "worst-case" supply scenario in which the Bay-Delta Plan Amendment is implemented as written, the implementation of actions identified as part of the Settlement Agreement, SFPUC's Alternative Water Supply Program, BAWSCA's 2015 Strategy, or Cal Water's Water Supply Reliability Study. As discussed in the Baylands Water Supply Assessment, Cal Water is working independently and with the other BAWSCA agencies to identify regional measures to improve reliability for regional and local water supplies and meet its customers' water needs.

Under Scenario 2, in which the Bay-Delta Plan Amendment or the Proposed Voluntary Agreement are not implemented, the Baylands Water Supply Assessment concluded that the three Peninsula Districts would have sufficient supply to meet demands in normal, single dry, and multiple dry years through 2040 and would only anticipate a supply shortfall of 15 percent during the fourth and fifth years of a multi-year drought by 2045 as shown in **Table 4.16-7**.

Under Scenario 3, Cal Water anticipates that the degree of water use reduction during dry years would also more closely align with the SFPUC's regional water system goal of limiting water use reduction to no more than 20 percent on a system-wide basis in drought years.

As described in the Baylands Water Supply Assessment, in response to anticipated future dry-year shortfalls, Cal Water has developed a Water Supply Contingency Plan that systematically identifies ways in which the South San Francisco District can reduce water demands during dry years. The overall reduction goals in the Contingency Plan are established for six drought stages ranging from 10 percent to more than 50 percent shortfalls.

The Baylands Water Supply Assessment notes that the SFPUC regional water system has historically met demand in its service area in all year types, and prior to 2021, only called for voluntary 10 percent rationing during 2007 to 2009 and 2014 to 2015. Although the South San Francisco District has not experienced any shortage of SFPUC regional water system deliveries, during the 2015/2016 drought it was subject to the Water Resource Control Board's mandatory water reduction target at 8 percent between June 2015 and May 2016. During this period, the South San Francisco District surpassed its reduction targets in each month and achieved an average water demand reduction of 20 percent compared to its water use in 2013. The Mid-Peninsula and Bear Gulch Districts were required to reduce water use by 16 percent and 36 percent, respectively, and through May 2016 exceeded their targets with cumulative reductions of 24.1 percent and 36.7 percent, respectively. In response to Governor Newsom's Executive Order N-7-22 and calls for water conservation from the Water Resources Control Board, the SFPUC entered into Level 2 of its Water Supply Contingency Plan, resulting in a voluntary

water use reduction goal of 11 percent. However, as of June 5, 2023, the Water Resources Control Board no longer requires water agencies to remain in Level 2 of their Contingency Plans.

In July 2024, the Water Resources Control Board adopted the "Making Water Conservation a California Way of Life" regulation to implement SB 606/AB 1668 annual water use objective requirements. As part of this regulation, urban water suppliers are required to calculate and report their Urban Water Use Objective beginning in January 2024 and every year thereafter. The Urban Water Use Objective is an estimate of efficient urban water use based on the adopted urban water use efficiency standards and local service area characteristics. By January 2027, compliance with the Urban Water Use Objective will be enforced.

Based on the three Peninsula Districts' most recent Urban Water Use Objective Report submitted to DWR in 2023 pursuant to SB 606/AB 1668 annual water use objective requirements, the South San Francisco District's actual water use was approximately 41 percent below its estimated objective, the Mid-Peninsula District's actual water use was approximately 28 percent below its estimated objective, and the Bear Gulch District's actual water use was approximately 20 percent above its estimated objective. It is expected that Urban Water Use Objectives will become incrementally more stringent over time, and achieving these objectives in the future could potentially require an increase in the three Peninsula Districts' conservation programming.

As customers within the District, existing and future development within the proposed expansion area would be obligated to comply with the demand reduction efforts imposed by Cal Water through implementation of Cal Water's Water Supply Contingency Plan in any future water shortage condition.

While the SFPUC's regional water system reliability is constrained by hydrology, physical facilities, and institutional parameters including state and federal regulations, the SFPUC is implementing both capital improvement and planning processes to enhance regional water system reliability and meet its contractual commitment to Wholesale Customers through 2045 (see SFPUC memorandum included as Appendix D). Within and outside the regional water system reliability, BAWSCA is also leading multiple efforts to develop additional water supply for its member agencies through implementation of its 2015 Strategy and development of its Strategy 2050 update.

Cal Water is also striving to increase the water supply portfolio for the South San Francisco, Mid-Peninsula, and Bear Gulch Districts through: (1) investment in water conservation, (2) participation in the Regional Groundwater Storage Project and the regional water recycling project (i.e., Potable Reuse Exploratory Plan [PREP]), and (3) development of integrated resource planning practices to create a long-term supply reliability strategy through 2050 for Cal Water districts in the Bay Area, among other things as described in the 2020 UWMPs for each District. As previously described, the Specific Plan will also implement the Baylands Water

Recycling Facility to meet the non-potable demands for the Specific Plan, other known developments, and existing customers in the SSF District. The three Peninsula Districts share access to Cal Water's SFPUC supply and, as such, any supply added to one of these Districts will benefit the others.

Significance Conclusion for Impact UTL-1

The water supply assessment projected that available water supplies will be sufficient to meet the demands under normal year hydrologic conditions through 2045, inclusive of existing and future development within Cal Water's three Peninsula Districts and the proposed water service expansion area under all Bay-Delta Plan Amendment scenarios. Under dry year hydrologic scenarios, projected shortfalls would be addressed through implementation of the District's Water Supply Contingency Plan. In addition, BAWSCA, Cal Water, and SFPUC are pursuing the development of additional water supplies to improve SFPUC's Regional Water System and South San Francisco District supply reliability. As stated in the Baylands Water Supply Assessment, participation in Cal Waters' Development Offset Program would not result in net increase in water demands for Specific Plan development or anticipated future development within Sierra Point. In addition, the Baylands water recycling facility would eliminate the use of potable water for non-potable purposes within the Specific Plan area and would provide 0.41 mgd of recycled water to the Cal Water South San Francisco District, which does not currently have access to recycled water, for non-potable uses.

Impacts would therefore be less than significant.

b. Threshold UTL-2: Construction and Improvement of Utility and Service System Facilities

Methodology for Determining Significance

The analysis of impacts associated with the development of water, wastewater, and energy utility facilities involves identifying whether physical environmental effects associated with construction, relocation, or improvement of new or expanded water, wastewater, energy, or telecommunications facilities would cause or contribute to one or more significant impacts not identified elsewhere in this EIR. The analysis of the adverse physical effects has been included as part of the overall project and in other impact analyses addressed in this EIR, such as biological resources; cultural resources; transportation; air quality; greenhouse gas emissions; noise; hazards and hazardous materials; geology and soils; hydrology and water quality; and public services and facilities.

Physical environmental effects associated with demolition and removal of existing utility facilities along with grading for site drainage, excavation/filling of trenches for underground utility systems throughout the Baylands, and for construction of new and expanded utility

facilities are largely indistinguishable from those of other Specific Plan grading and construction activities within the Baylands and are not parsed out separate from the other Specific Plan construction impacts, including those leading to significant unavoidable net increases in NO_X emissions (Impact AQ-2) and greenhouse gas emissions (Impact GHG-1) during grading and construction. Demolition, removal, and construction of utility facilities within the Baylands are included as part of the grading quantities used to analyze transportation, air quality, greenhouse gas and energy construction impacts (Sections 4.8, 4.9, 4.10, and 4.11, respectively). Analysis of construction noise impacts for Baylands development incorporates noise generated by grading, excavations, demolition, and construction for utility facilities in its analyses and conclusions (see Section 4.12).

Impacts of site grading and construction on biological, cultural, tribal cultural, and paleontological resources include the contribution of utility facilities to the overall impacts of site grading for Baylands development. Hazards and hazardous materials impact analyses include the contribution of utility facilities as well as potential impacts of vibration generated by construction activities adversely affecting existing utilities within the Specific Plan area.[354] Geological impact analyses address not only the site's suitability for construction of above-ground buildings and utility structures, but also the site's suitability for installation of underground utilities, including, for example, the potential for encountering expansive or corrosive soils.[355] Ongoing energy generation and consumption by Baylands water and other utility facilities are included in the analysis of the site's energy generation and demand.[356]

The analysis of the Specific Plan's impact related to wastewater treatment facilities addresses the on-site water treatment facility and identifies the increased amount of wastewater that would be generated by buildout of the Specific Plan, addition of waste activated sludge to sewage flows, and the capacity of the wastewater treatment facilities to which sewage from the Baylands would be discharged. If Baylands development would exceed Bayshore Sanitary District's treatment capacity allocation or otherwise require modifications to SFPUC treatment facilities that would have a substantial adverse environmental effect, a significant impact would result.

Table 4.16-8 identifies the utility improvements addressed as part of overall Baylands development in other EIR sections and those analyzed in Impact UTL-2.

[354] Analysis addressing hazards and hazardous materials can be found in Section 4.13.

[355] Geological impact analyses related to suitable of soils for underground utility lines can be found in Section 4.15.

[356] See Section 4.11 for analysis of the energy consumption characteristics of the on-site water recycling facility.

Table 4.16-8: Summary of Baylands Water, Wastewater, Energy, and Telecommunications Utility Facilities Addressed in Impact UTL-2 and as Part of Overall Baylands Development

Physical Improvements	Description
Potable Water: see Draft EIR Section 3.3.2h	Included in analyses of overall Baylands construction and operation impacts are: • Removal of existing Baylands water system. • Construction of on-site potable water system improvements as illustrated in Draft EIR **Figure 3-43**. • Construction of on-site water storage reservoir.
Recycled Water: see Draft EIR Section 3.3.2h	Included in analyses of overall Baylands construction and operation impacts are: • Construction of on-site water recycling facility. • Construction of on-site recycled water system improvements as illustrated in Draft EIR **Figure 3-45**. • Construction of off-site recycled water system improvements as illustrated in Draft EIR **Figure 3-42**.
Wastewater: see Draft EIR Section 3.3.2i	Included in analyses of overall Baylands construction and operation impacts are: • Removal of existing Baylands wastewater system. • Construction of on-site wastewater system improvements as illustrated in Draft EIR **Figure 3-46**. Analyzed in Impact UTL-2 is: • Increased wastewater flows, including waste activated sludge discharged to the SFPUC wastewater treatment system.

Energy Facilities: see Draft EIR Section 3.3.2k	Included in analyses of overall Baylands construction and operation impacts are:
	• Underground existing on-site electrical lines.
	• Construct on-site electrical system, including:
	  ○ New underground electrical lines;
	  ○ Switching substation;
	  ○ Distributed battery storage;
	  ○ 250 utility-scale battery storage facility;
	  ○ 55-acre solar farm; and
	  ○ Building- and parking lot-mounted renewable energy generation.
	Analyzed in Impact UTL-2 is:
	• Connections to and improvements at the PG&E Martin Substation as described in Draft EIR Section 3.3.2g.

Telecommunications Facilities: see Draft EIR Section 3.3.2l	Construction and operation of Baylands telecommunications facilities is analyzed as part of the overall impacts of Baylands development.

Impact Assessment

Construction of Off-Site Connections to and Improvements at the Martin Substation

As described in the Energy Facilities section of Chapter 3, *Project Description*, the Specific Plan proposes an on-site electrical switching substation and battery storage facility that will include connections to and improvements at the existing PG&E Martin Substation, which is located across Bayshore Boulevard from the Baylands. Improvements needed at the Martin Substation to connect the 250 MW battery storage facility and Baylands development include:

1. Install line disconnect switch and line coupling capacitor voltage transformers for the generation tie line with the following protection:
    a. Install line current differential (LCD) relay scheme on the Martin Substation — Baylands Battery 115kV line. Relays compliant with PG&E specifications and requirements at the installation will be used.
2. Install fiber termination at the Martin Substation

a. Each LCD scheme will be provided with redundant fiber circuits with no common point of failure.
    b. Install, terminate, and test new fiber cable from station property line to control building.

All electrical utility improvements would be designed and installed by PG&E in accordance with CPUC and PG&E design standards.

Discharge of Wastewater and Waste Activated Sludge

The SFPUC indicates that its Southeast Treatment Plant (SEP) currently receives an average dry weather flow of 60 mgd, which accounts for approximately 70 percent of its available dry weather flow capacity of 85.4 mgd. The SFPUC upgraded the SEP wet weather flow capacity to 250 mgd in 1994 to comply with federal regulations requiring a reduction in Combined Sewer Overflow discharges to the Bay. In addition, the North Point Wet Weather Facility operates when the SEP approaches capacity. To further reduce the frequency of combined sewer overflows into the Bay and increase system capacity, the San Francisco recently constructed a parallel 169-inch combined sewer facility along the County of San Francisco and County of San Mateo jurisdictional limits directly north of the Baylands.

Under the current contract, the City of Brisbane is allowed to convey dry weather sewer discharges to the SEP of up to 6.0 mgd. As identified in the 2017 City of Brisbane Sanitary Sewer System Master Plan (2017 SSMP), the current discharges for dry weather and wet weather conditions are approximately 0.72 mgd and 3.6 mgd, respectively.[357] As indicated in **Table 4.16-6**, the addition of Baylands average daily sewage generation (1.09 mgd) to City dry weather wastewater flows would not exceed Brisbane's 6.0 mgd capacity. Thus, no new or improved facilities would be required to treat Baylands-generated wastewater at the SEP.

Operation of the water recycling facility would generate flow to the SFPUC Southeast Treatment Plant that would consist of 0.74 mgd of excess wastewater not used by the WRF and 0.05 mgd of waste activated sludge, a byproduct of the membrane bioreactor system (MBR). The

[357] As stated in the Baylands Infrastructure Report, the BSD has no set capacity allocation at the SEP based on its current contract. The established BSD protocol has been that if a proposed project requires service for a demand greater than 200,000 gpd, then the district would request confirmation from the staff at the SEP that capacity is available.

Southeast Treatment Plant has a 250-mgd capacity and currently treats 57 mgd of wastewater with the City of Brisbane allowed to convey up to 6.0 mgd of dry weather sewer discharges. The 0.05 mgd of waste activated sludge would constitute 0.09 percent of the 57 mgd total currently treated at the Southeast Treatment Plant. Given this small percentage of treated sewage, waste activated sludge discharged from the Baylands WRF to the Southeast Treatment Plant would be sufficiently diluted so as to (1) not require any modifications to the plant or result in changes to water quality from treated wastewater and (2) not result in changes to water quality from treated wastewater discharged to San Francisco Bay.

Significance Conclusion for Impact UTL-2

Impact UTL-2 would be less than significant for the following reasons.

- Electrical utility improvements would be designed and installed by PG&E in accordance with CPUC and PG&E design standards. Conformance with applicable CPUC, PG&E, and City requirements would sustain efficiency of the utility grid and reduce life-cycle costs.
- No improvements to the SFPUC wastewater treatment facilities would be needed to treat Baylands-generated wastewater.
    - Baylands development would not exceed Brisbane's 6.0 mgd wastewater treatment capacity.
    - The raw sewage, treated sewage, and waste activated sludge discharged to SFPUC's Southeast Treatment Plant would be sufficiently diluted so as to (1) not require any modifications to the plant or result in changes to water quality from treated wastewater and (2) not result in changes to water quality from treated wastewater discharged to San Francisco Bay.

c. Threshold UTL-3: Waste Diversion

Methodology for Determining Significance

Analysis of the 2025 Specific Plan project's impacts identifies the amount of solid waste that would be generated during on- and off-site construction and operation of Specific Plan land uses. The analysis identifies the anticipated amount of construction debris and operational solid waste that would be generated and the amount that would be disposed of in landfills after implementation of applicable recycling/diversion programs.

Threshold UTL-3 analyzes the extent to which Baylands development would minimize solid waste generation and maximize diversion of solid wastes from landfills and incinerators set forth in applicable solid waste management and reduction statutes, regulations, plans, policies,

and strategies. Compliance with these statutes, regulations, plans, policies, and requirements would be indicative of a less than significant impact.

Impact Assessment

Construction Impacts

Baylands demolition and construction activities would generate a substantial amount of solid waste such as wood, metal, concrete, bricks, drywall/gypsum/sheetrock, carpet, and dirt/fill. Demolition of existing industrial buildings within the Baylands would generate the greatest amount of solid waste (1,828.06 tons on a peak demolition day) during site development compared to 920 tons on a peak construction day as shown in **Table 4.16-9**.

Table 4.16-9: Daily Construction Waste Generation Estimates

	Residential and Non-Residential (square feet)[a]	Construction Waste Generated[b]		
		Pounds	Tons[c]	Cubic Yards[c]
Demolition				
Total	231,400	36,561,200	18,280.60	26,115.14
Maximum Day[d]		3,656,120	1,828.06	2,611.51
Construction				
Phase 1	4,500,000	19,530,000	9,765.00	19,530.00
Maximum Day[e]		1,953,000	920.00	1,840.00
Phase 2	2,500,000	10,850,000	5,425.00	10,850.00
Maximum Day[e]		1,085,000	542.50	1,085.00

SOURCE: Metis Environmental Group, 2024.

NOTES:

a. Residential development is assumed to have an average of 1,300 square feet per dwelling unit.
b. Demolition was assumed to generate approximately 158 pounds of solid waste per square foot of building area. Construction was assumed to generate 4.34 pounds of waste per square foot of building area. Construction solid waste generation based on USEPA, 2009.
c. Weight of solid waste was converted to cubic yards based on WasteCap Resource Solutions, Inc., 2011.
d. Maximum day is assumed to represent 10 percent of the total square footage undergoing demolition.
e. Maximum day is assumed to represent 10 percent of the total square footage undergoing construction.

Operations

As shown in **Table 4.16-10**, an estimated 1,703.37 cubic yards of solid waste would be generated weekly within the Baylands, 374.12 cubic yards of which would be hauled to a landfill based on Recology's projected 78 percent diversion rate including compliance with the City's Municipal Code and applicable state and federal regulations.

Table 4.16-10: Baylands Projected Weekly Solid Waste Generation

Source	Size	Trash To Landfill (cubic yards)	Recycling (cubic yards)	Composting (cubic yards)	TOTAL (cubic yards)
Residential	2,200 dwelling units	185.1	479.30	174.30	838.70
Commercial	6,500,000 sf building area	150.0	375.00	150.00	675.00
Hotel	500,000 sf building area	30.0	75.00	30.00	135.00
Park	64.4 acres	5.60	20.30	13.30	39.20
Community Center	3,000 sf building	0.95	1.90	1.30	4.15
School	350 students	2.47	7.29	1.56	11.32
TOTAL		**374.12**	**958.79**	**370.46**	**1,703.37**

NOTES: Source for waste generation and diversion rates: Recology San Francisco, 2024.

Significance Conclusion for Impact UTL-3

Baylands development would minimize solid waste generation and maximize diversion of solid wastes from landfills and incinerators consistent with applicable solid waste management and reduction statutes, regulations, plans, policies, and strategies, resulting in a less than significant impact for the following reasons.

- Baylands development would meet the requirements of Brisbane Municipal Code Chapter 15.75 that a minimum of 65 percent of nonhazardous construction and/or demolition waste and 100 percent of inert solid material associated with excavations and land clearing operations, including trees, stumps, and rocks be recycled and/or salvaged for re-use.
- Baylands development would, at a minimum, participate in the same waste diversion programs provided by Recology operations to residential and commercial customers within the City and County of San Francisco, which exceed the requirements of applicable solid waste management and reduction statutes, regulations, plans, policies, and strategies and are more extensive than those currently available within Brisbane.[358]

[358] CalRecycle, *Disposal Rate Calculator*, access on June 21, 2024, Disposal Rate Calculator. For 2023, San Francisco reported a disposal rate of 3.4 pounds per resident and 3.9 pounds per employee, which are below the target rates of 6.6 pounds per resident and 10.6 pounds per employee set for San Francisco by CalRecycle. By comparison, South San Francisco Scavenger achieved a disposal rate of 12.6 pounds per resident and 6.9 pounds per employee, which are also below the target rates of 16.9 pounds per resident and 7.9 pounds per employee set for Brisbane by CalRecycle.

San Francisco has long been recognized for its zero waste programs. In 2012, San Francisco succeeded in diverting close to 80% of its waste, the highest rate achieved by any major city in the US. San Francisco also reported a 11.7% reduction in total disposal volumes from 2015-20. San Francisco and Recology are highlighted as a case study for zero on the US EPA website (https://www.epa.gov/transforming-waste-tool/zero-waste-case-study-san-francisco).

d. Threshold UTL-4: Landfill Capacity

Methodology for Determining Significance

The analysis of the Specific Plan's impact on solid waste and landfill facilities identifies changes in the amount of solid waste that would be generated during Specific Plan construction and operation. The analysis identifies the anticipated amount of non-hazardous construction debris and operational solid waste that would be generated from implementation of the Specific Plan and the amount that would be processed at Recology's San Francisco transfer facility and disposed of in landfills after compliance with applicable recycling/diversion programs.

Specific Plan solid waste generation was compared to the daily capacity of Recology's San Francisco transfer facility and the amount of solid waste to be disposed of in landfills after recycling/diversion was compared with the available capacity of the landfills serving the site to assess the significance of the Specific Plan's solid waste generation during construction and at build-out. Impacts were considered significant if development within the Specific Plan area would result in a substantial increase in solid waste that would exceed available landfill capacity.

Impact Assessment

As noted in the analysis of Impact UTL-3, Baylands development would generate:

- 2,611.51 cubic yards of demolition waste during the peak day of demolition operations;
- 1,840.00 cubic yards of construction waste during the peak construction day; and
- 374.12 cubic yards of waste to be disposed of at a landfill on a weekly basis at buildout (72.82 cubic yards based on five pickup days per week).

During the maximum construction day, 75 percent of the 1,840.00 cubic yards of construction waste generated within the Baylands would be diverted from landfill disposal. Thus, a maximum of 460 cubic yards of construction waste would need to be disposed of at a landfill. Because a maximum construction day could occur after site occupancy begins, a peak day for waste generation to be sent to a landfill is estimated to be 535 cubic yards (460 cubic yards of construction waste plus 55 cubic yards of operations waste (374.12 cubic yards of waste weekly divided by 5 days of trash pickup).

Landfill waste generated within the Specific Plan area would be hauled to Recology's Hay Road Facility for disposal. The Hay Road landfill has approximately 27,569,000 cubic yards of capacity with an estimated remaining site life of 38 years. The Hay Road facility is permitted to receive 3,200 tons of waste daily, and, according to Recology, has sufficient daily capacity to accommodate the Specific Plan's needs.

Significance Conclusion for Impact UTL-4

Because Recology's Hay Road Landfill currently has daily capacity to accept solid waste from the Baylands and approximately 27,569,000 cubic yards of long term capacity with an estimated remaining site life of 38 years, the addition of 535 cubic yards of solid waste per day from the Specific Plan area on a peak construction day (3,054 tons) and 427 tons per day following construction would not exceed the permitted daily capacity of the Hay Road landfill or substantially reduce its life expectancy. Thus, Specific Plan development would not exceed the capacity of area landfills, and no new or expanded facilities would be needed.

Impacts would therefore be less than significant.

4.16.7 REFERENCES – UTILITIES, SERVICE SYSTEMS, AND WATER SUPPLY

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4.17 PUBLIC SERVICES AND FACILITIES

4.17.1 INTRODUCTION

a. Overview

This section addresses the physical environmental effects of new or expanded governmental facilities that are necessary to maintain acceptable service levels for police, fire protection, schools, libraries, and other essential services. Because CEQA focuses on physical environmental effects, this section analyzes projected increased service demands that would be generated by the 2025 Specific Plan project as a means for determining whether new or expanded public facilities might be needed that could cause significant physical environmental effects. Thus, increased demand for public services, the need to expand staffing associated with public services, and increased numbers of students at area schools are not considered physical changes in the environment. However, construction of new facilities or expansion of existing facilities to accommodate increased demand, staffing, or students are considered to be physical changes to the environment that could result in a significant impact.

b. Definitions

Fire confinement refers to holding structure fires to the floor of origin (i.e., preventing the fire from spreading to additional floors after first arrival on the scene).

Index crimes are the eight crimes the Federal Bureau of Investigation combines to produce its annual crime index. The Federal Bureau of Investigation created a common definition for crime comparison to compare statistical information on a national basis. The index seeks to overcome differences in individual state statutes and create a standardized definition of crime classification. The City-Data.com index weighs serious crimes and violent crimes more heavily. A higher index means more crime. The crime index adjusts for the number of visitors and daily workers commuting into cities.

Response time refers to the time between when a police or fire call for service is received, and the time first responders arrive at the scene.

Running distance refers to the distance a fire company must travel on roadways and highways between the station and the scene to which the company is responding.

Squad refers to a specialized fire protection company whose primary focus may be suppression but carry specialized equipment and are trained to perform hazmat, rescue, and other special functions.

Total reflex time is measured from the time a call is received at the county communications center to the arrival of the first apparatus at the scene. Typically, for the public, the response time clock begins when an individual becomes aware there is an emergency incident occurring. While the difference between the two may vary by only a minute or two, the distinction is significant in that fire service response time goals are set to measure fire service performance from the moment the emergency enters the system.

4.17.2 PHYSICAL ENVIRONMENTAL SETTING

a. Baseline

The baseline for analysis of public services effects consists of conditions that existed at the release of the second Notice of Preparation during spring 2023. When existing conditions and analyses address a full year of data, the most recent year for which data is available is used and specific citations are provided indicating the year used to describe existing conditions and for analysis purposes.

b. Police Services

The Brisbane Police Department provides police services to residents and businesses within the City of Brisbane. The Department currently operates from its headquarters located in City Hall at 50 Park Place, less than 0.5 miles from the Baylands.

Police Staffing

The Department is staffed with 16 sworn officers and 4 support staff members. The staff is composed of one chief, one commander, four patrol sergeants, one corporal, and nine patrol officers. Officers are assigned specialty positions; for example, there is one K9 officer, two traffic officers, and one SWAT officer. Current patrol staffing consists of a single beat with a minimum of one sergeant or shift supervisor and two other officers per shift.

The current ratio of sworn police officers per 1,000 residents is approximately 3.42, based on the city's 2022 population of 4,672. Based on a total resident and worker population of almost 13,000 in 2022, a citywide ratio of 1.23 officers per 1,000 residents and workers is currently provided.

Per Department practice, five sworn officers are required to staff a patrol beat with a single officer 24 hours per day, seven days per week. Currently, Brisbane Police officers work four 12-hour shifts with four days off. This results in two shifts (dayshift and nightshift) and two teams, one of which is working the four days the other team is off. Considering there may be one officer on vacation, sick, or away at training at any given time, the result is that a minimum of

five officers is required to cover each 24/7 shift. Exceptions include staffing for daytime positions such as Community Service Officers, Detectives, and School Resource Officers.

The Brisbane Police Department maintains thirteen vehicles, including six patrol cars, two motorcycles, one pick-up truck, three unmarked detective vehicles, two unmarked administration vehicles and one unmarked Code Enforcement vehicle.

Service Demand

Table 4.17-1 summarizes the number of service calls to the Brisbane Police Department and average response time for calendar year 2022.

Table 4.17-1: Brisbane Police Department Calls for Service and Average Response Times, 2022

Service Call Type	Number of Service Calls	Average Response Time (minutes: seconds)
Priority 1 Emergency life threatening	107	3:09
Priority 2 Emergency response (other)	1,566	3:57
Priority 3 Non-emergency	1,186	5:20
TOTAL CALLS FOR SERVICE	**2,859**	

SOURCE: Brisbane Police Department, 2023

Based on City-Data's crime index, Brisbane's 2020 crime rate was 228.6, which is less than, but comparable to, the U.S. average of 254.8 (City-Data.com 2023). Rates in neighboring cities include 182.6 in South San Francisco, 129.4 in Daly City, 387.4 in San Francisco, and 1,234.8 in Colma. As a City with a small resident population and a large daytime worker population, Brisbane's per capita crime rate was higher than in 79.6 percent of U.S. cities. The 2020 Brisbane crime rate fell by 5 percent compared to 2019. In the last five years, Brisbane has seen a rise in violent crime and a decline in property crime (City-Data.com 2023).

c. Fire Services

Formed in 2003, the North County Fire Authority (NCFA) is a Joint Powers Authority that provides fire protection, emergency medical, and hazardous materials assistance services to the cities of Brisbane, Daly City, and Pacifica. NCFA will be responsible for providing fire protection services to the Baylands.

NCFA's Fire Prevention Division seeks to ensure that all new buildings comply with state and local building and fire code requirements. Members of the Fire Prevention Division attend meetings during the design and development stage with architects, fire protection engineers,

and contractors to assure code compliance, accelerate the review and approval process, and minimize construction delays. One of the most important local requirements is that every new building constructed is equipped with an automatic fire sprinkler system.

In addition to its firefighting and emergency medical response capabilities, the NCFA, through its Training and Special Operations Divisions, train for and respond to emergencies involving hazardous materials, as well as incidents involving cliff/high angle, urban search and rescue, structural collapse, water rescue, confined space, trench rescue, terrorism/weapons of mass destruction, major transportation incidents - BART/Caltrain, and mass casualty incidents.

Facilities and Staffing

The NCFA currently operates eight engine companies and one ladder truck company in eight fire stations within its 60-square-mile service area. NCFA fire stations include:

- City of Brisbane
    - Fire Station No. 81 at 3445 Bayshore Boulevard (engine company)
- City of Daly City
    - Fire Station No. 91 at 151 Lake Merced Boulevard (engine company)
    - Fire Station No. 92 at 18 Bepler Street (engine company)
    - Fire Station No. 93 at 464 Martin Street (engine company)
    - Fire Station No. 94 at 444 Gellert Boulevard (engine company)
    - Fire Station No. 95 at 191 Edgemont Drive (engine and ladder truck companies)
- City of Pacifica
    - Fire Station No. 71 at 616 Edgemar Avenue (engine company)
    - Fire Station No. 72 at 1100 Linda Mar Boulevard (engine company)

There are at least three firefighters, including at least one paramedic, assigned to each engine, while the ladder truck is staffed with four personnel. In addition, a minimum of two battalion chiefs and one deputy fire chief are on duty 24/7. Currently, the NCFA maintains 30 personnel on duty daily.

Fire Station No. 81 (Brisbane)

The City of Brisbane and the Baylands are served by NCFA Fire Station No. 81 (Brisbane), which is located on an approximately 94,000 s.f. site (3445 Bayshore Boulevard) at the intersection of Bayshore Boulevard and Valley Drive in Brisbane. The 1-story, 7,700 s.f. station has two apparatus bays housing four vehicles, with 18 turnout gear lockers, a clean-up sink, washer and dryer for house laundry, and a hose storage rack to accommodate one complement

of synthetic hose along the sides of the bays. The station is staffed 24/7 by one three-person engine company. Thirteen personnel are assigned to Station No. 81, including one Assistant Fire Marshal, three captains, and nine firefighters.

Based on a review of current operations at the existing station, the City of Brisbane and NCFA determined that an 8,600 to 9,000 s.f. facility would be needed to meet current building codes, the California Essential Services Act, the American with Disabilities Act, National Fire Protection Association (NFPA), and Occupational Safety and Health Administration (OSHA) design standards.

NCFA Fire Stations No. 93 and No. 95 (Daly City)

Fire Station No. 93, located at 464 Martin Street in Daly City, located approximately one mile from the Baylands, is the next closest NCFA station. This station is staffed by a three-person engine company.

NCFA's existing aerial ladder company is located at Station No. 95, located at 191 Edgemont in Daly City. This station is more than 6.5 miles running distance and more than 15 minutes running time from the closest portion of the Baylands.

Service Demand

The NCFA responded to approximately 9,774 incidents throughout its service area in 2020. Most of these calls were for medical emergencies, followed by rescue, alarm, assist, vehicle accidents, other/unknown, fires, and hazmat/hazardous conditions. NCFA achieved getting a first due fire company on scene in 5 minutes and 28 seconds to all fire and medical emergencies from time of dispatch to arrival, which more than achieved its goals (NCFA 2022).

In 2022, Station No. 81 responded to a total of 822 service calls; 626 of which originated from within the City of Brisbane as follows:

- Emergency Medical Services – 181
- Alarm – 149
- Traffic Collision – 62
- Public Assist – 49
- Fire – 31
- Other – 154

The average response time to calls that originated from within the City was 5 minutes and 50 seconds (NCFA 2023).

d. Schools

The Bayshore Elementary School District (Bayshore ESD), Brisbane School District (Brisbane SD), and the Jefferson Union High School District (JUHSD) provide PK/TK–12 public education

to Brisbane residents (see **Figure 4.17-1**). The Baylands Specific Plan area is almost entirely located within the Bayshore ESD for grades PK–8. The area along the existing Industrial Way is within the Brisbane SD for grades TK–8. The entirety of the Baylands is within the JUHSD for grades 9–12. As in many Bay Area school districts, enrollment in the school districts serving Brisbane has been declining (see **Table 4.17-2**).

Table 4.17-2: Enrollment Data for Schools Serving Brisbane

School	Capacity	7-Year Peak Enrollment[a]	2022–2023 Enrollment	2018–2019 (Pre-Pandemic Enrollment)	7-Year Average Enrollment
Bayshore Elementary School District[b]					
Bayshore School (PK–8)	568	409 (2019–20)	347	409 (2019–2020)[c]	367
DISTRICTWIDE TOTALS	**568**	**409 (2019–20)**	**347**	**409**	**367**
Brisbane School District					
Brisbane Elementary School (TK–5)	N/A[d]	230 (2020–21)	205	193	204
Panorama Elementary School (TK–5)	N/A	136 (2018–19)	117	136	124
Lipman Middle School (6–8)	N/A	160 (2016–17)	132	139	137
DISTRICTWIDE TOTALS	**N/A**	**475 (2019–20)**	**454**	**468**	**465**
Jefferson Union High School District					
Terra Nova High School (Pacifica)	1,155	982 (2016–17)	739	812	820
Oceana High School (Pacifica)	997	619 (2017–18)	535	599	589
Westmoor High School (Daly City)	1,677	1,598 (2016–17)	1,302	1,526	1,447
Jefferson High School (Daly City)	1,264	1,325 (2020–21)	1,159	1,217	1,213
Thornton High School (Alt. Education)	198	140 (2019–20)	77	124	113
DISTRICTWIDE TOTALS	**5,691**	**4,869 (2017–18)**	**3,812**	**4,278**	**4,182**

SOURCES: California Department of Education (CDE) Data Quest, 2023, Bayshore Elementary School District Letter to Metis Environmental Group, September 29, 2023, and Jefferson Union High School District Letter to Metis Environmental Group, September 28, 2023

NOTES:

a. The numbers shown in this column identify the highest enrollment in a certain year for each school and district during the 7-year period of 2016-2023. The numbers are not meant to be added together.
b. The Bayshore School consolidated into one school in 2017. Therefore, peak enrollment and average enrollment numbers are for the 6-year time period between 2017-2023.
c. The Bayshore School District provided 2019–2020 for its pre-pandemic enrollment as enrollment was higher this year than in 2018-2019.
d. N/A= Not Available.

Bayshore Elementary School District

The Bayshore ESD serves residents in the eastern portions of Daly City and Brisbane. In 2017, the Bayshore ESD consolidated Bayshore Elementary School and Robertson Intermediate School (grades 5–8) into the Bayshore School, which currently serves Pre-Kindergarten (PK) through grade 8. The PK–8 school is designed to accommodate 568 students, with 47,000 s.f. on two floors and an indoor/outdoor theater/gym. The Bayshore School is located 0.5 miles west of the Baylands at 155 Oriente Street in Daly City. Bayshore School enrollment was 347 students in 2022–2023, down from its seven-year peak of 409 in the 2019–2020 school year. The school's six-year average enrollment is 367 students (CDE 2023).

Figure 4.17-1: Bayshore and Brisbane School District Boundaries

Brisbane School District

The Brisbane SD encompasses most of Brisbane and parts of Daly City and South San Francisco. The Brisbane SD is a Transitional Kindergarten (TK)–8 school district composed of two elementary schools and one middle school. The district had a combined enrollment of 454 students in the 2022–2023 school year, down from the seven-year peak of 475 students in the 2019–2020 school year. The Brisbane SD's seven-year average enrollment is 464 students (CDE 2023).

The elementary school closest to the Baylands is Brisbane Elementary School, located less than 1 mile west at 500 San Bruno Avenue. Panorama Elementary School, located at 25 Bellevue Avenue in Daly City, is less than 2 miles west of the Baylands. Lipman Middle School, located at 1 Solano Street, is also less than 1 mile from the Baylands.

Jefferson Union High School District

Residents of the Bayshore ESD and Brisbane SD are also residents of the Jefferson Union High School District. In 2022–23, the JUHSD served approximately 3,800 students in grades 9 through 12, as well as adults, in the cities of Pacifica, Brisbane, Daly City, Colma, South San Francisco, San Bruno and a portion of unincorporated San Mateo County.

The JUHSD operates four high schools—Jefferson (Daly City), Westmoor (Daly City), Terra Nova (Pacifica), and Oceana (Pacifica)—in addition to the Thornton continuation high school (Daly City). Enrollment in the JUHSD has shown a relatively steady decline over the last several years. District enrollment was 3,812 in the 2022–23 school year, down from the peak of 4,278 in pre-pandemic year 2018-2019. Each of the high schools' 2022–2023 enrollments were below their respective 7-year average and below pre-pandemic enrollment (CDE 2023).

The two JUHSD schools closest to the Baylands are Jefferson High School, approximately 3 miles west of the Baylands at 6996 Mission Street in Daly City; and Westmoor High School, approximately 4 miles west of the Baylands at 131 Westmoor Avenue in Daly City.

e. Library Services

San Mateo County operates 13 community libraries in 12 cities and towns within the incorporated and unincorporated areas of San Mateo County. Brisbane is served by the Brisbane Branch Library, located 0.5 miles west of the Baylands. The 7,700 square foot Brisbane Library opened at its new location at 163 Visitacion Avenue in April 2021. Features include the Library's children's area, teen space, quiet room, history room and makerspace complete with 3D printers, a Glowforg laser cutter, sewing machines, virtual reality, GoPro kits, and more. The exterior portions of the site include a courtyard, patio area, vegetated areas, and a water garden. Parking is accommodated on-street; no off-street parking is available.

A library card issued at the Brisbane Library entitles patrons to online resources as well as to use the resources and services available at all the libraries in the Peninsula Library System, which is a consortium of 35 public and community college libraries working together to provide innovative and cost-effective service. Additionally, 13 branch libraries of the Daly City, San Francisco, and South San Francisco public library systems are located within 3.5 miles of the Baylands.

f. City of Brisbane Corporation Yard

The City of Brisbane corporation yard is located at 1020 Tunnel Avenue on a site leased from the company that operates the Kinder Morgan tank farm. The corporation yard consists of a single building along with outside storage and parking areas for equipment used for infrastructure maintenance throughout the City.

4.17.3 REGULATORY CONTEXT FOR BAYLANDS DEVELOPMENT

a. Federal Laws, Plans, Programs, and Regulations

There are no federal laws, plans, programs, or regulations relevant to physical environmental effects associated with public services or facilities.

b. State Laws, Plans, Programs, and Regulations

Fire Protection

California Fire (Building) Code

The California Building Code establishes building requirements for construction and renovation. The 2022 edition, which was published July 1, 2022, took effect on January 1, 2023. Included in the California Building Code is the California Fire Code, which establishes minimum requirements that would provide a reasonable degree of safety from fire, panic, and explosion. The Fire Prevention Code mandates certain requirements, including, among other things, that plans submitted in support of an application for a building permit must first be reviewed by the fire department. The City of Brisbane enforces the Building Code through its building permit review process. The City of Brisbane has adopted the 2022 edition of the California Fire Code as its Fire Prevention Code within the Buildings and Construction Chapter of the City's Municipal Code.

Health and Safety Code

The California Health and Safety Code, Section 13000, et seq., includes regulations concerning building standards (as also set forth in the California Building Code), fire protection systems, fire protection devices (such as extinguishers and smoke alarms, and high-rise building

standards), and standards for building inspection and certification. The City of Brisbane enforces these standards through its building permit review process.

School Facilities

Local Control Funding Formula

Enacted in 2013, Local Control Funding Formula legislation fundamentally changed how local educational agencies throughout the state were funded. The law aims to improve outcomes by providing more resources to meet the education needs of low-income students, English language learners, and foster youth. The law also expanded the autonomy of local districts by giving them greater flexibility over how they choose to spend state funding. In exchange for greater flexibility, school districts are now required to provide greater transparency to local communities on how district funds will be spent by producing a 3-year spending and academic plan called a Local Control and Accountability Plan.

School Districts are funded through a combination of local property taxes and state funding from the State School Fund and Education Protection Account. For school districts and charter schools, local control funding is allocated through the "principal apportionment," which is a series of apportionment calculations that adjust the flow of state funds throughout the fiscal year as information becomes known.

With the exception of a few categorical funds, money goes directly to districts based on student attendance. Each district receives the same base grant for each student based on grade level. Then the district receives additional "supplemental" and "concentration" grants based on the numbers and concentration of high-need students (defined as low-income, English language learner, or foster youth). Thus, a district that serves more high-need students will receive more state funding overall than a district of the same size that serves fewer high-need students. A district must explain in its local spending plan how its use of supplemental and concentration funds will increase or improve services for high-need students in proportion to the increase in supplemental and concentration funds it receives.

Financing Act and Education Code

California Government Code Sections 53080, 65995, and 66001 authorize school districts to collect fees for construction of school facilities from new residential and commercial development. Additionally, California Education Code Sections 17620 through 17626 state that the governing board of any school district is authorized to levy a fee, charge, dedication, or other requirement against any construction within the boundaries of the district, for the purpose of funding the construction or reconstruction of school facilities, subject to any limitations set forth in Chapter 4.9 (commencing with Section 65995) of Division 1 of Title 7 of the Government Code. Current school fees for local school districts are $5.17/square foot (s.f.)

for residential development and $0.84/s.f. for commercial/industrial development (City of Brisbane 2024).

Senate Bill 50 – Leroy F. Greene Schools Facilities Act of 1998

Senate Bill (SB) 50, or the Leroy F. Greene School Facilities Act of 1998, restricts the ability of local agencies to deny project approvals on the basis that public school facilities (classrooms, auditoriums, etc.) are inadequate. Payment of school fees required by SB 50 for all new residential development projects[359] is considered "full and complete mitigation" for any impacts a project may have on school capacity. School impact fees are paid at the time of building permits to offset capital cost impacts associated with new developments, which result primarily from costs of additional facilities, related furnishings and equipment, and projected capital maintenance requirements. As such, cities and counties cannot require additional mitigation for any school impacts other than those required by law. While school fees are the sole mitigation available for the need to construct school facilities, the physical environmental changes caused by school construction are subject to CEQA analysis and mitigation if significant impacts would occur.

Assembly Bill 130 – Education Trailer Bill of 2021

In 2021, as part of the expansion to universal Pre-Kindergarten (PK), Governor Newsom signed AB 130 to phase in Transitional Kindergarten (TK) access for all of California's 4-year-olds. TK has been provided beginning in the 2022–23 school year for children turning 5 between September 2 and February 2 of that school year and reach full implementation for all students turning 4 years old by September 1 by 2025–26.

State Standards for School Site Selection: California Code of Regulations (CCR) Title 5, Section 14010

CCR Title 5, Section 14010 sets forth the California Department of Education's location, design, and safety criteria for school site location, including:

a. The net usable acreage and enrollment for a new school site shall be consistent with the numbers of acres and enrollment established in Tables 1–6 of the 2000 Edition, "School Site Analysis and Development" published by the California Department of Education and incorporated into this section by reference, in toto, unless sufficient land is not available, or circumstances exist due to any of the following:

    1. Urban or suburban development results in insufficient available land even after considering the option of eminent domain.

[359] School fees are also collected for commercial and industrial development on a square footage basis since parents are now permitted to register children for school by either their place of residence or place of employment.

2. Sufficient acreage is available, but it would not be economically feasible to mitigate geological or environmental hazards or other site complications which pose a threat to the health and/or safety of students and staff.
3. Sufficient acreage is available but not within the attendance area of the unhoused students or there is an extreme density of population within a given attendance area requiring a school to serve more students on a single site. Choosing an alternate site would result in extensive long-term bussing of students that would cause extreme financial hardship for the district to transport students to the proposed school site.
4. Geographic barriers, traffic congestion, or other constraints would cause extreme financial hardship for the district to transport students to the proposed school site.

b. If a school site is less than the recommended acreage required in subsection (a) of this section, the district shall demonstrate how the students will be provided an adequate educational program including physical education as described in the district's adopted course of study.

c. The property line of the site even if it is a joint use agreement as described in subsection (o) of this section shall be at least the following distance from the edge of respective power line easements:
    1. 100 feet for 50-133 kilovolt (kV) line.
    2. 150 feet for 220-230 kV line.
    3. 350 feet for 500-550 kV line.

d. If the proposed site is within 1,500 feet of a railroad track easement, a safety study shall be done by a competent professional trained in assessing cargo manifests, frequency, speed, and schedule of railroad traffic, grade, curves, type and condition of track need for sound or safety barriers, need for pedestrian and vehicle safeguards at railroad crossings, presence of high pressure gas lines near the tracks that could rupture in the event of a derailment, preparation of an evacuation plan. In addition to the analysis, possible and reasonable mitigation measures must be identified.

e. The site shall not be adjacent to a road or freeway that any site-related traffic and sound level studies have determined will have safety problems or sound levels which adversely affect the educational program.

f. Pursuant to Education Code sections 17212 and 17212.5, the site shall not contain an active earthquake fault or fault trace.

g. Pursuant to Education Code sections 17212 and 17212.5, the site is not within an area of flood or dam flood inundation unless the cost of mitigating the flood or inundation impact is reasonable.

h. The site shall not be located near an above-ground water or fuel storage tank or within 1500 feet of the easement of an above-ground or underground pipeline that can pose a safety hazard as determined by a risk analysis study, conducted by a competent professional, which may include certification from a local public utility commission.

i. The site is not subject to moderate to high liquefaction or landslides.

j. The shape of the site shall have a proportionate length to width ratio to accommodate the building layout, parking and playfields that can be safely supervised and does not exceed the allowed passing time to classes for the district.

k. The site shall be easily accessible from arterial roads and shall allow minimum peripheral visibility from the planned driveways in accordance with the Sight Distance Standards established in the "Highway Design Manual," Table 201.1, published by the Department of Transportation, July 1, 1990, edition, and incorporated into this section by reference, in toto.

l. The site shall not be on major arterial streets with a heavy traffic pattern as determined by site-related traffic studies including those that require student crossings unless mitigation of traffic hazards and a plan for the safe arrival and departure of students appropriate to the grade level has been provided by city, county or other public agency in accordance with the "School Area Pedestrian Safety" manual published by the California Department of Transportation, 1987 edition, incorporated into this section by reference, in toto.

m. Existing or proposed zoning of the surrounding properties shall be compatible with schools in that it would not pose a potential health or safety risk to students or staff in accordance with Education Code Section 17123 and Government Code Section 65402 and available studies of traffic surrounding the site.

n. The site shall be located within the proposed attendance area to encourage student walking and avoid extensive bussing unless bussing is used to promote ethnic diversity.

o. The site shall be selected to promote joint use of parks, libraries, museums and other public services, the acreage of which may be included as part of the recommended acreage as stated in subsection (a) of this section.

p. The site shall be conveniently located for public services including but not limited to fire protection, police protection, public transit, and trash disposal whenever feasible.

q. The district shall consider environmental factors of light, wind, noise, aesthetics, and air pollution in its site selection process.

r. Easements on or adjacent to the site shall not restrict access or building placement.

s. The cost and complications of the following shall be considered in the site selection process and should not result in undue delays or unreasonable costs consistent with State Allocation Board standards.

    1. Distance of utilities to the site, availability and affordability of bringing utilities to the site.
    2. Site preparation including grading, drainage, demolition, hazardous cleanup, including cleanup of indigenous material such as serpentine rock, and off-site development of streets, curbs, gutters, and lights.
    3. Eminent domain, relocation costs, severance damage, title clearance and legal fees.
    4. Long-term high landscaping or maintenance costs.
    5. Existence of any wildlife habitat that is on a protected or endangered species list maintained by any state or federal agency, existence of any wetlands, natural waterways, or areas that may support migratory species, or evidence of any environmentally sensitive vegetation.

t. If the proposed site is on or within 2,000 feet of a significant disposal of hazardous waste, the school district shall contact the Department of Toxic Substance Control for a determination of whether the property should be considered a Hazardous Waste Property or Border Zone Property.

u. At the request of the governing board of a school district, the State Superintendent of Public Instruction may grant exemptions to any of the standards in this section if the district can demonstrate that mitigation of specific circumstances overrides a standard without compromising a safe and supportive school environment.

c. Regional Plans Programs, and Regulations

North County Fire Authority

Formed in 2003, the North County Fire Authority (NCFA) is a Joint Powers Authority that provides fire protection, emergency medical, and other hazardous assistance services to the communities of Brisbane, Daly City, and Pacifica.

As part of the environmental review for the Program EIR, the NCFA and City of Brisbane set the following performance standards for emergency response to the Baylands:

- Total Reflex Time
    - Seven-minute Total Reflex Time (four-minute travel time) for the first responding fire company for 90 percent of incidents.

  - Eleven-minute Total Reflex Time (eight-minute travel time) for multiple fire companies for 90 percent of all structure fires.

- Fire Station Location and Reliability
  - All Baylands development to be within 1.5 miles of a fire station.
  - All Baylands development to be within 2.0 miles of a ladder truck.
  - Fire Confinement Success Rate – holding structure fires to floor or origin (i.e., preventing the fire from spreading to additional floors after first arrival on the scene) for 90 percent of structure fires.

d. City of Brisbane Plans, Ordinances, and Regulations

General Plan

Chapter V: Land Use

Policy LU.19: Provide centrally located public facilities for public services and community events so as to maximize use by Brisbane residents and businesses.

Program LU.19.d: In coordination with the School District, continue shared community use of District facilities.

Chapter X: Community Health and Safety

Policy 156: Take advantage of technology to require built-in fire safety systems using appropriate materials and technology.

Policy 158: Provide a level of fire protection proportional to the size, risks and service demands of the community within budgetary constraints.

Program 158a: 1n conjunction with development applications, evaluate fire service requirements, response times and levels of risk. Require impact fees and exactions to maintain the level of service and to provide for any special equipment needs.

Policy 160: Provide a level of police protection of persons and property proportional to the size and law enforcement needs of the community within budgetary constraints.

Program 160a: In conjunction with land use development applications, evaluate police service requirements and response times. Require impact fees and exactions to maintain the level of service.

Policy 163: Continue to ensure a three-minute emergency response average and a ten-minute average response to other calls for service.

Chapter XII: Policies and Programs by Subarea

Policy BL.1: Development within the Baylands Subarea shall be subject to the City's approval of a single specific plan for the entirety of the Baylands Subarea and a development agreement that is consistent with General Plan policies, incorporates all applicable EIR mitigation measures, and is consistent with the following standards:

D. Each increment of development shall be provided with appropriate transportation related and other infrastructure, facilities, and site amenities as determined by the City. Such transportation related and other infrastructure, facilities, and site amenities (e.g., parks, open space preservation, habitat enhancement) shall be provided at the developer's cost.

Municipal Code

The City of Brisbane adopted the 2022 edition of the California Fire Code as its Fire Prevention Code within the Buildings and Construction Chapter of the City's Municipal Code. The Fire Prevention Code mandates certain requirements, including, among other things, that plans submitted in support of an application for a building permit must first be reviewed by the fire department.

City of Brisbane Emergency Operations Plan

The City, through its Emergency Services Department, has developed an Emergency Operations Plan that provides procedures and establishes responsibilities for coordinating response to major emergencies and disasters. The City's Emergency Operations Center is at 50 Park Place (City Hall) and provides a centralized location where emergency management coordination and decision making can be supported. When activated, the Emergency Operations Center provides support for several critical tasks related to communications, coordination, resource management, and executive leadership (City of Brisbane 2018).

4.17.4 RELEVANT SPECIFIC PLAN PROVISIONS

An approximately 5-acre middle school (grades 6–8) site is proposed in the vicinity of Main Street within the Bayshore School District portion of either Block 6, 9, or 10, or to the south of Main Street within Block C2 of the Icehouse Hill District. The Specific Plan is silent in relation to police, fire, library, and other public facilities.

4.17.5 SIGNIFICANCE CRITERIA

The following criteria were used to determine the significance of public services and facilities impacts.

Threshold PUB-1: **The Baylands Specific Plan would cause a significant impact if adverse physical environment effects associated with construction of new or physically altered on-site or off-site fire protection, police, school, or other public facilities would cause or contribute to one or more of the significant impacts not disclosed elsewhere in this EIR.**

4.17.6 PROJECT IMPACTS AND MITIGATION MEASURES

a. Impact PUB-1: New and Expanded Public Facilities

Methodology for Determining Significance

Determining the significance of public services and facilities impacts is based on evaluating:

- The extent to which the Specific Plan would increase demand for services;
- Whether an increased demand for services would require construction of new facilities or expansion of existing facilities to maintain adequate response times; and
- Whether such construction of new facilities or expansion of existing facilities would have an adverse physical effect on the environment.

A significant impact would occur if (1) the Specific Plan−generated demand for service could not be accommodated within existing facilities and therefore require the construction of new or expansion of existing facilities that (2) would have an adverse physical effect on the environment. Because the physical environmental effects of project-wide activities such as site grading and building construction cannot be parsed out and assigned to individual public facilities within the Baylands. Thus, the significance determination for Impact PUB-1 focuses on whether construction of a new or expansion of an existing public facility necessitated by Baylands development would cause a significant impact in addition to those analyzed for overall Baylands development in the other sections of this chapter.

Physical environmental effects associated with demolition and removal of existing on-site buildings, along with grading for site drainage, excavation/filling of trenches for underground utility systems throughout the Baylands, and for construction of new and expanded public facilities within the Baylands are largely indistinguishable from those of other Specific Plan grading and construction activities and are not parsed out separate from the other Specific Plan construction impacts, including those leading to significant unavoidable net increases in NO_X emissions (Impact AQ-2) and greenhouse gas emissions (Impact GHG-1) during grading and

construction. Demolition, removal, and construction activities within the Baylands are included as part of the grading quantities used to analyze transportation, air quality, greenhouse gas, and energy construction impacts (Sections 4.8, 4.9, 4.10, and 4.11, respectively). Analysis of construction noise impacts for Baylands development incorporates noise generated by grading, excavations, demolition, and construction of public facilities in its analyses and conclusions (see Section 4.12).

Impacts of site grading and construction on biological, cultural, tribal cultural, and paleontological resources include the contribution of new and expanded public facilities to the overall impacts of site grading for Baylands development. Hazards and hazardous materials impact analyses include the contribution of utility facilities as well as potential impacts of vibration generated by construction activities that may adversely affect existing utilities within the Specific Plan area.[360] Geological impact analyses address the site's suitability for construction of above-ground buildings, including those used to provide public services.[361] Ongoing energy generation and consumption by new and expanded public facilities are included in the analysis of the site's energy generation and demand.[362]

Impact Assessment

Police Facilities

Table 4.17-1 summarizes the number of service calls to the Brisbane Police Department and average response time for calendar year 2022. These calls for police service were generated by a resident population of 4,721 and a daytime worker population of approximately 13,000. The Baylands Specific Plan is expected to generate a maximum resident population of 4,905 and a maximum daytime worker population of approximately 19,480 at buildout. Thus, the number of calls for police service received by the Brisbane Police Department as a result of Baylands development is expected to approximately double.

To accommodate the anticipated doubling of service calls that Baylands development would cause and maintain adequate response times, the City developed a Police Facilities and Staffing Plan (BPD 2023, Appendix N.1). The Plan proposes the following changes in police service, staffing, and facilities:

- Prior to the start of Baylands grading operations:
    - Initiate a two-beat patrol system by adding a new 24/7 officer shift and one civilian daytime shift along with the equipment needed to support the additional shift.

[360] Analysis addressing hazards and hazardous materials can be found in Section 4.13.

[361] Geological impact analyses related to suitable of soils for underground utility lines can be found in Section 4.15.

[362] See Section 4.11 for analysis of the energy consumption characteristics of the on-site water recycling facility.

- Prior to issuance of the first Certificate of Occupancy for new residential or commercial buildings within the Baylands:
    - Construct and initiate operation of a police substation within the Baylands to accommodate additional required staff.

      The facility would be sized to accommodate a waiting area, interview room, office space to allow officers assigned to the Baylands-designated patrol beat to take reports while remaining within the beat area, temporary holding facilities, restroom, storage area, and emergency generator.

      The Baylands substation would be located within a ground-floor location that is easily visible and accessible to the general public.

The Police Facilities and Staffing Plan (Appendix N.1) determined that the existing police station has adequate space to accommodate the projected two-beat patrol system. However, given the Baylands' location in relation to downtown Brisbane and the existing police station, the BPD also determined that maintaining adequate response times would require a substation within the Baylands.

The physical environmental effects associated with construction and operation of a new police substation within the Baylands, including increases in the demand for utilities, are addressed in the overall analysis of Baylands development set forth in relevant sections throughout this EIR, including mitigation of impacts as necessary.

Fire Protection Facilities

As discussed in Section 4.17.3 (b), in 2022, NCFA Station No. 81 responded to a total of 822 calls, of which 626 originated from within the City of Brisbane. These calls for service were generated by a resident population of 4,721 and a daytime worker population of approximately 13,000. At buildout, the Baylands Specific Plan is expected to generate a resident population of 4,905 and a daytime worker population of approximately 19,480. Thus, the Baylands Specific Plan would approximately double Brisbane's resident and daytime worker population. As a result, the number of calls for fire protection service received by the Brisbane Fire Station is expected to approximately double with buildout of the Specific Plan. Service calls for specialized services, including but not limited to rescue and hazmat, are also expected to increase with buildout of the Specific Plan.

Because many Baylands residential dwellings and nearly all commercial office square footage is anticipated to occur within buildings that are 75 feet or more in height, including six towers proposed to be more than 250 feet (20+ stories) in height planned along the west side of the Caltrain rail line, emergency response by a ladder company would be needed. NCFA's existing aerial ladder company at 191 Edgemont in Daly City is more than 6.5 miles running distance and more than 15 minutes running time from the closest portion of the Baylands, which does

not meet NCFA's performance standards of the mitigation measure established for the Baylands in the Final Program EIR (MM 4-L-3, all Baylands development to be within 2.0 miles of a ladder truck). Because of the small size of existing Fire Station No. 81 and the shape of its site, expanding Station No. 81 to add a ladder company would not be feasible (NCFA 2023, Appendix N.2).

To accommodate the anticipated doubling of service calls that would result from Baylands development and maintain adequate response times throughout the city, including adequate response times for buildings over 75 feet in height and specialized response to calls for medical assistance, rescue, hazmat, and other special functions within Brisbane, the NCFA and City of Brisbane prepared a Fire Protection and Facilities Plan (NCFA 2023, Appendix N.2). This plan, which would establish a new ladder truck company and a squad[363] in addition to the existing Engine Company No. 81, proposes the following:

- Prior to the start of construction of any building within the Baylands that is 75 feet or more in height:
    - Relocate the existing NCFA Fire Station No. 81 to 140 Valley Drive to house the existing Engine Company No. 81. **Figure 3-55** illustrates a conceptual site plan for the relocated fire station and its location in relation to the existing Station No. 81.
    - Establish a new ladder truck company to be temporarily housed at the relocated Station No. 81 until such time as a new fire station is constructed and operational within the Baylands.
- Prior to certificates of occupancy for 50 percent of <u>either</u> (1) Mid- and High-Density Residential <u>or</u> (2) Mid- and High-Density Commercial areas identified on Specific Plan Figure 2.1, Land Use Plan, a new fire station shall be constructed and operational at a location within the Baylands acceptable to the North County Fire Authority and the City of Brisbane. The new fire station within the Baylands would house the ladder truck company that was temporarily housed at the relocated Figure Station No. 81 and a squad would be established for the new station.
    - Unless otherwise approved by the North County Fire Authority and the City of Brisbane, the specific location, site plan, and building plans for the new station shall:
        - Have ready access to the US 101 freeway and the Geneva Avenue extension, be in a functional location based on the Baylands Specific Plan Figure 2.1, Land Use Plan, and able to remain operational with minimal or no interference from future improvement of the Candlestick

[363] "Squad" refers to a specialized company whose primary focus may be suppression but carry specialized equipment and are trained to perform hazmat, rescue, and other special functions.

Interchange based on the most recent plans identified and maintained by the Brisbane City Engineer for such improvements.

- Be capable of permanently housing the ladder truck company temporarily housed at the relocated Station No. 81 along with a new squad as detailed in the Fire Protection Plan (NCFA 2023, Appendix N.2).

- To ensure the ability of the ladder truck company and squad housed at the new Baylands fire station to achieve acceptable ladder company response times within the Baylands and Sierra Point and acceptable squad response times throughout the City of Brisbane, the following roadway improvements would need to be constructed and functional when the new Baylands fire station becomes operational:
  - Geneva Avenue extension from Bayshore Boulevard to Alana Way, including the bridge over the Caltrain right-of-way.
  - The northern extension of Sierra Point Parkway from its current terminus at the US 101 southbound freeway ramps to Geneva Avenue.

The physical environmental effects associated with construction and operation of a new fire station within the Baylands are addressed in the overall analysis of Baylands development set forth in relevant sections of this EIR, including feasible mitigation of impacts as necessary.

Relocation of the existing fire station would include demolition of the existing building at 140 Valley Drive along with construction of the new station. Where the physical environmental effects associated with relocating the existing Fire Station No. 81 were not included in the overall assessment of the Specific Plan, relocation-specific impacts are explicitly addressed in the following EIR sections:

- Land Use (Section 4.3)
  - Relocating Fire Station No. 81 would be consistent with General Plan Policy 158, which calls for providing a level of fire protection proportional to the size, risks, and service demands of the community within budgetary constraints.
- Biological Resources (Section 4.6)
  - Trees subject to the provisions of Brisbane Municipal Code Chapter 12.12 would be removed. However, because the provisions of that Chapter are for private projects requiring permits from the City, relocation of the City's existing fire station would not require a City permit to remove trees within the relocation site.

    The North County Fire Authority and City are, however, committed to achieving a 1:1 replacement of trees removed within the relocation site to the extent compatible with the fire station's emergency services function.

- Cultural and Paleontological Resources (Section 4.7)
    - Demolition of the existing building and construction of a fire station at 140 Valley Drive would not have cultural or paleontological resources impacts unless excavations extended down into native, previously undisturbed ground, which is not anticipated.
    - Mitigation Measures MM CUL-2a, MM CUL-2b, and MM CUL-2d would address the potential for discovery of previously unknown cultural resources. MM GEO-7a and MM GEO-7b would address the potential for discovery of previously unknown paleontological resources
- Air Quality (Section 4.9)
    - Demolition of the existing building at 140 Valley Drive and construction of the relocated fire station was incorporated into the analysis of construction impacts in Section 4.9, which concluded that construction NO_X emissions from Baylands construction activities would be reduced, but not below the significance thresholds, while fugitive PM_{10} and $PM_{2.5}$ impacts from construction would be reduced to less than significant through Mitigation Measure MM AQ-2a. Although the relative contribution of constructing the relocated fire station would be small in relation to overall Baylands construction impacts, construction of the relocated fire station would contribute to the significant construction impact and be subject to applicable mitigation requirements.
    - Because the relocated fire station would generate no more air pollutant emissions at its new location than it does at its current location, it would not contribute to significant and unavoidable operational air quality impacts.
- Greenhouse Gas Emissions (Section 4.10)
    - Demolition of the existing building at 140 Valley Drive and construction of the relocated fire station was incorporated into the analysis of construction impacts in Section 4.10, which concluded that greenhouse gas emissions during construction, while temporary, would be significant and unavoidable. Although the relative contribution of constructing the relocated fire station would be small in relation to overall Baylands construction impacts, construction of the relocated fire station would contribute to the significant construction impact and be subject to applicable mitigation requirements.
    - Because the relocated fire station would be expected to generate no more greenhouse gas emissions at its new location as it does as its current location, it would not contribute to significant and unavoidable operational greenhouse gas emissions impacts identified in Section 4.10.

- Noise and Vibration (Section 4.12)
    - Demolition of the existing building at 140 Valley Drive and construction activities for the relocated fire station would increase noise levels at the nearest sensitive receptor which is located approximately 1,000 feet from the relocated fire station on San Francisco Avenue in Brisbane, by 1.4 dBA. Construction impacts would thus be less than significant.
    - The operational noise impacts of the relocated fire station would be similar to those of the City's existing fire station.
- Hazards and Hazardous Materials (Section 4.13)
    - The relocated fire station would include an above-ground 1,000-gallon fuel storage tank and engage in fueling of vehicles housed at the station. The storage tank would be required to meet applicable design standards to minimize the risk of leaks and ensure public health and safety are protected.

Schools

Because Baylands development is anticipated to approximately double Brisbane's resident and daytime worker population, the Bayshore ESD and JUHSD superintendents suggested that the number of students that would be generated by Baylands development would conservatively approximate the peak enrollment of the TK–8 grade students in the Brisbane SD and the peak number of JUHSD high school students residing within the City of Brisbane[364] (Personal Communication, Superintendents Presta and Veal, 2023).

Based on current enrollment at Brisbane SD, Brisbane's 2022 resident population of 4,672 and daytime employment population of 13,000 generated a total of 454 students in the 2022/2023 school year. Brisbane SD's seven-year peak enrollment as a district occurred in the 2019/2020 school year with 475 grade TK–8 students, composed of 344 grade TK–5 students and 131 grade 6–8 students (CDE 2023). Therefore, it is anticipated that the Baylands Specific Plan would generate approximately 475 grade TK–8 students, as shown in **Table 4.17-3**. Based on the peak number of students from Brisbane enrolled in JUHSD high schools, Superintendent Presta estimated that Baylands Specific Plan development would generate approximately 60 high school students (Personal Communication, Superintendent Presta, 2023).

[364] The Brisbane School District serves Brisbane's entire resident population and all employment-generating uses within the City except for the Recology solid waste transfer station, Golden State Lumber, and other commercial uses along Tunnel Avenue.

Elementary School Student Generation and Capacity

BAYSHORE ELEMENTARY SCHOOL DISTRICT

Table 4.17-3 projects that Baylands development would generate approximately 337 elementary school students in the Bayshore ESD. To accommodate additional students, the Bayshore ESD intends to convert the existing Bayshore School, which now serves grades TK–8 and has a capacity for 568 students, back to an elementary school serving grade TK–5 students. According to California Department of Education data (CDE 2023), approximately 62 percent of the students at the existing Bayshore School are in grades TK–5, which equals 217 elementary school students in the 2022/2023 school year. Thus, after adding 337 Baylands students to the existing 217 grade TK–5 students enrolled at the Bayshore School, approximately 554 grade TK–5 students would be anticipated to attend Bayshore Elementary School after buildout of the Baylands. Therefore, the newly converted elementary school would have adequate capacity to accommodate additional elementary school students generated by the Baylands.

BRISBANE SCHOOL DISTRICT

As shown in **Figure 4.17-1**, the portion of the Specific Plan area along Industrial Way is located within the Brisbane SD. The Brisbane SD elementary school closest to the Baylands is Brisbane Elementary School, located less than 1 mile west at 500 San Bruno Avenue. **Table 4.17-3** projects that approximately seven elementary school students would be generated by the portion of the Specific Plan within the Brisbane SD. Adding seven new students to the school's 2022/2023 enrollment of 205 (for a total of 212) would be less than the 7-year peak enrollment of Brisbane Elementary School, which was 230 students. Therefore, there would be adequate capacity with the addition of Baylands students.

Middle and High School Student Generation and Capacity

BAYSHORE ELEMENTARY SCHOOL DISTRICT

Table 4.17-3 estimates that up to 128 middle school students in the Bayshore ESD could be generated by Specific Plan development. According to CDE data (CDE 2023), approximately 38 percent of the students at the existing Bayshore School are in grades 6–8, which equals 132 middle school students in the 2022/2023 school year. Using peak enrollment, there were approximately 155 middle school students in the Bayshore ESD. Bayshore ESD plans to convert the Bayshore School, which currently serves grades TK–8, back to an elementary school serving students TK–5 and construct a new middle school on the Baylands to accommodate students from the Baylands. Thus, enrollment at the proposed Baylands middle school is anticipated to be 283 students, including 155 existing grade 6–8 students currently attending the Bayshore School from the Daly City portion of the district and the 128 additional Baylands students.

Table 4.17-3: Baylands Specific Plan Student Generation

School District	Specific Plan Development[a]	Grade Level	Peak # of Brisbane ESD Students[b]	Projected Number of Baylands Students[c]
Bayshore Elementary School District	2,158 dwelling units	Elementary (Grades TK–5)	344	337
	6.1 million s.f. non-residential	Middle (Grades 6–8)	131	128
		TOTAL	**475**	**465**
Brisbane School District	42 dwelling units	Elementary (Grades TK–5)	344	7
	900,000 s.f. non-residential	Middle (Grades 6–8)	131	3
		TOTAL	**475**	**10**
Jefferson Union High School District	2,200 dwelling units	High School (Grades 9–12)	60	60
	7.0 million s.f. non-residential			

NOTES:

a. The number of dwelling units and square footage of non-residential are estimates based on maximum density allowed within the small area along Industrial Way that is included within the Brisbane School District service area. Of the 2,200 dwelling units proposed within the Baylands, it is estimated that approximately 98% of those units would be built within the Bayshore Elementary School district service area and 2% within the Brisbane School District service area. Of the 7.0 million square feet of proposed non-residential uses, it is estimated that approximately 87% of those uses would be built within the Bayshore Elementary School District service area and 13% within the Brisbane School District.

b. To estimate the number of students to be generated by the Baylands Specific Plan's doubling of Brisbane's resident and daytime population, the 7-year peak enrollment of Brisbane School District was used, including Brisbane Elementary, Panorama Elementary, and Lipman Middle School. Superintendent Presta estimated that the peak number of students within the Jefferson Union High School District residing in Brisbane is 60.

c. While non-residential uses do generate students based on parent's place of employment, the majority of student generation comes from residential uses. Therefore, it was assumed that 98% of students generated by the Baylands would attend Bayshore Elementary School District schools and 2% of students would attend Brisbane School District schools. All Baylands high school students would attend high schools within the Jefferson Union High School District.

BRISBANE SCHOOL DISTRICT

Lipman Middle School, located at 1 Solano Street, is located less than 1 mile from the Baylands. **Table 4.17-3** estimates that approximately three middle school students would be generated by Specific Plan development in the area along Industrial Way that is within the Brisbane School District (see **Figure 4.17-1**). Adding three new students to the 2022/2023 enrollment of 132 students would result in 135 students. Since the 7-year peak enrollment of Lipman Middle School was 160 students, it is reasonable to conclude that there would be adequate capacity with the addition of Baylands students.

JEFFERSON UNION HIGH SCHOOL DISTRICT

All students from Brisbane ESD and Bayshore ESD attend JUHSD high schools. Based on the peak number of students from Brisbane enrolled in JUHSD schools, Superintendent Presta estimated approximately 60 high school students would be generated by Specific Plan development (Personal Communication, Superintendent Presta, 2023). **Table 4.17-2** indicates that the JUHSD as a whole could accommodate an additional 1,879 students based on 2022–2023 enrollment. Current capacity at Westmoor and Jefferson High Schools (the high schools closest

to the Baylands) is 2,941 students, with a 2022–2023 enrollment of 2,461 students, resulting in capacity for an additional 480 students. Superintendent Presta has confirmed that there would be sufficient capacity within existing JUHSD schools to accommodate additional students generated by the Baylands (Personal Communication, Superintendent Presta, 2023).

Physical Impacts Associated with School Facilities Improvements

PROPOSED ON-SITE MIDDLE SCHOOL

To meet the increased demand for schools generated by Baylands development, the Specific Plan provides for a grade 6–8 middle school to be located within the Baylands. State and District approval of that proposed school is required, and a school site suitability assessment report would be undertaken by the school district pursuant to the state school site approval process.

The Bayshore Mobility Plan proposed as part of Baylands development would provide safe bicycle and pedestrian crossings of Bayshore Boulevard at Geneva Avenue and Main Street (see Section 3.3., *Bayshore Mobility Plan*). Section 4.8, *Transportation*, analyzes pedestrian and bicycle connections between residential areas within the Baylands and the Bayshore School, as well as between Daly City residential areas within the Bayshore ESD and the proposed middle school within the Baylands. The analysis provided in Section 4.8 also addresses vehicular, bicycle, and pedestrian travel to and from the proposed school and provides appropriate mitigation measures.

Section 4.13, *Hazards and Hazardous Materials*, evaluates the proposed middle school in relation to safety criteria for school site locations provided in CCR Title 5, Section 14010, which set performance standards for the protection of schools within the state from environmental hazards and risks of upset. As required by state law, the proposed middle school would meet the standards set forth in CCR Title 5, Section 14010 or prepare the required studies for review by the Department of Education and to secure approval of the proposed school site pursuant to the provisions of CCR Title 5, Section 14010(u).

The middle school, which would be designed to accommodate 300 to 325 students, would be located along the south side of Main Street west of the Specific Plan's amenities area. This location would provide for separation from the Caltrain rail line and Kinder Morgan tank farm without a loss of land for residential development.

CONVERSION OF THE EXISTING BAYSHORE SCHOOL FROM A PK–8 SCHOOL TO A PK–5 ELEMENTARY SCHOOL

Following approval by the state and construction of a middle school (grades 6–8) within the Baylands, the existing Bayshore School would be converted back to an elementary school for PK to grade 5 students. Since the Bayshore School was just remodeled and upgraded in 2017, only minimal improvements, such as conversion of sports fields to playgrounds and adjustments to

classrooms, would be needed to convert the school from a PK–8 school back to a PK–5 elementary school.

Library Facilities

The Specific Plan would slightly more than double Brisbane's existing resident and daytime worker population without providing for expanded library facilities. According to San Mateo County Libraries, adding the projected population of Baylands development to the City of Brisbane "would likely impact library hours, parking/public transportation, staffing and usage of library space" (San Mateo County Libraries 2023). As a result, overuse and deterioration of the existing Brisbane Library could occur, necessitating construction of a new library.

Brisbane Corporation Yard

Baylands development would generate a resident population of 4,905 and a daytime worker population of approximately 19,480, approximately doubling the City's current daytime resident (4,721) and worker (13,000) populations. Because of its higher development intensity compared to the balance of Brisbane, Baylands development would substantially increase but not double the amount of roadway and other infrastructure to be maintained by the city. The existing Brisbane Corporation Yard, which is triangular in shape, has limited usable area, and was not designed to accommodate demands resulting from proposed Baylands development. Accordingly, the Project would require expansion of the City's corporation yard.

Significance Conclusions for Impact PUB-1

Impacts associated with construction of public facilities within the Specific Plan area would be indistinguishable from those of other grading and construction activities within the Baylands, which include significant unavoidable net increases in emissions of non-attainment criteria pollutants (ROG, NOx, PM_{10}, $PM_{2.5}$), and greenhouse gas. Operation of Baylands-related public facilities would also contribute to significant and unavoidable air quality and greenhouse gas impacts.

The contribution of Baylands-related public facilities impacts is addressed in the air quality and greenhouse gas emissions sections of this chapter. In addition, physical environmental impacts associated with construction and operation of a new police substation, relocation of Fire Station No. 81, and construction and operation of a second fire station are addressed in the overall analysis of Baylands development set forth in relevant sections of this EIR, along with necessary mitigation measures. The physical environmental impacts associated with construction and operation of the proposed middle school within the Baylands, including consistency with the design and safety standards set forth in CCR Title 5, Section 14010 and the requirement to demonstrate safety and provide mitigation for any hazards prior to approval pursuant to CCR Title 5, Section 14010(u), are addressed in the overall analysis of Baylands development set forth in relevant sections of this EIR, along with necessary mitigation measures.

Impact PUB-1 would be less than significant in relation to police, fire protection, and schools for the following reasons:

- Where the physical environmental effects associated with relocating the existing Fire Station No. 81 can be distinguished from the overall assessment of the Specific Plan, they are explicitly addressed and would be less than significant.[365]
- Since the existing Bayshore School was just remodeled and upgraded in 2017, only minimal exterior and interior improvement would be needed to convert the Bayshore School from a PK–8 school to a PK–5 elementary school.

Impact PUB-1 would, however, be significant in relation to libraries and the City's corporation yard for the following reasons:

- The Specific Plan would more than double Brisbane's existing resident and daytime worker population without expanding library facilities, resulting in overuse and deterioration of the existing Brisbane Library and requiring the construction of a new library.
- The existing corporation yard is not capable of storing sufficient equipment to maintain existing service levels for the City of Brisbane with the addition of Baylands service demands. The result could be inadequate maintenance capability and deterioration of municipal infrastructure. Accordingly, expansion of the City's corporation yard would be required.

Program EIR Mitigation Measures

MM PUB-1a: On-Site Library (Program EIR Mitigation Measure 4.L-4). To avoid overuse of existing and proposed library facilities, a library facility shall be developed within the Baylands that is of sufficient size to serve the Specific Plan's population. The on-site library shall be constructed and operational prior to issuance of the occupancy permits for more than 50 percent of the residential dwelling units permitted by the Specific Plan, thereby ensuring an on-site resident population at the time of its opening.

Significance Conclusion for Impact PUB-1 with Implementation of Program EIR Mitigation Measures

Mitigation Measure MM PUB-1a would ensure adequate library facilities to serve Baylands development without causing deterioration of existing facilities. The physical environmental

[365] Impacts associated with relocation of the existing Figure Station No. 81 are explicitly analyzed in the following EIR sections: Land Use, Biological Resources, Cultural Resources, Air Quality, Greenhouse Gas Emissions, Noise and Vibration, and Hazards and Hazardous Materials.

effects of establishing a Baylands library facility cannot be parsed out from the overall impacts of Baylands development and have been addressed throughout the impact analyses provided in this EIR.

Mitigation Measure MM-PUB-1a, however, does not address the City's corporation yard.

Additional Mitigation Measures

MM PUB-1b: Corporation Yard. The Specific Plan shall reserve a site for a new corporation yard acceptable to the Brisbane Public Works Director that meets the following criteria:

- Approximately 2.5 usable acres;
- Generally square in shape;
- Level;
- Fully remediated; and
- Has a direct connection to a minimum roadway classification of collector.

Significance Conclusion for Impact PUB-1 with Implementation of All Mitigation Measures

Mitigation Measures MM PUB-1a and MM PUB-1b provide for adequate library facilities and land for a new corporation yard that would maintain existing service levels with the addition of Baylands service demands and would reduce impacts to less than significant. The physical environmental effects of expanding the City's corporation yard cannot be parsed out from the overall impacts of Baylands development and have been addressed throughout the impact analyses provided in this EIR.

4.17.7 REFERENCES – PUBLIC SERVICES AND FACILITIES

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4.18 PARKS, OPEN SPACE/OPEN AREAS, AND RECREATIONAL RESOURCES

4.18.1 INTRODUCTION

a. Overview

This section analyzes whether the 2025 Specific Plan project would either (1) increase the use of existing parks, open space/open areas, or recreational facilities such that substantial physical deterioration or degradation of the facilities would occur or be accelerated; or (2) result in adverse physical effects on the environment associated with the provision of new or expanded parks, open space/open areas, or recreational facilities. It also evaluates the impacts of Baylands development on windsurfing resources in San Francisco Bay adjacent to the Candlestick Point State Recreation Area and Baylands site.

b. Definitions

Bikeway, Class I, often referred to as a **bike path** or **shared use path**, is a hiking/biking trail with an improved surface that is physically separated from the street, often consisting of a concrete or asphalt surface for bicycle travel and an unpaved surface for hiking and jogging.

Bikeway, Class II, often referred to as a **bike lane**. It often consists of a striped on-street lane between the curb or parking lane and auto travel lanes.

Bikeway, Class III, often referred to as a **bike route**, consists of shared use of automobile travel lanes and is marked with street signs.

Bikeway, Class IV consists of a raised bike lane that is separated from moving traffic both vertically and horizontally with a distinct buffer that is a minimum of 1 foot wide (3 feet adjacent to parking).

Community recreational facilities include community centers; dedicated sports fields; tennis, paddleball, basketball, volleyball, and other types of sports courts; gymnasiums; skateboard facilities; community swimming pools; and other similar developed recreational facilities that may or may not be located within a formal "park."

Open area, as described in the Brisbane General Plan Land Use Element, consists of land, primarily in private ownership, which serves to soften the impacts of urban development by providing primarily green areas and a feeling of "openness" to the overall development pattern. Open areas include, but are not limited to, setbacks and easements that are landscaped or characterized by native vegetation, gardens, and landscaped vegetation. Open areas might also include golf courses and private parks and recreation areas within private developments. An

open area may consist of a combination of hardscape and landscape, typical of plazas, sculpture gardens, and gathering places. Streets, sidewalks, parking lots, and similar improvements, although not covered by structures, are not included in the definition of an "open area."

Open space, as used in this EIR, refers to lands the Specific Plan designates for parks and recreation facilities that would be available to the public along with lands designated for the preservation or enhancement of biological resources.

Parks and recreational facilities, for purposes of this EIR, include (1) active recreational use areas such as a children's play apparatus area, paved game concrete area, turf playfield, picnic area, community garden, dog park, running or walking trails, swimming pool, or recreation center building; (2) passive recreational use areas such as a landscaped park; (3) special facilities open to the public such as lakes or golf courses; and (4) cultural/educational attractions within open space areas otherwise devoted to the preservation of natural resources.

Sailable day refers to a day on which there exists a minimum two-hour window between the hours of 12:00 p.m. and 7:00 p.m. local time at the Candlestick Point State Recreation Area wind sensor such that 75 percent of the observations during that two-hour window are Sailable Observations (a minimum lull wind speed of 10 miles per hour [mph], a minimum mean wind speed of 16 mph, and a minimum gust wind speed of 20 mph and a wind direction either west, west-northwest, or northwest).

Government Code Section 65560 Types of "Open Space"

California planning law identifies five types of open space:

- **Open space for public health and safety**, including, but not limited to, areas that require special management or regulation because of hazardous or special conditions;
- **Open space for the preservation of natural resources**, including, but not limited to, natural vegetation, fish and wildlife, and water resources;
- **Open space for resource management and production**, including, but not limited to, agricultural and mineral resources, forests, rangeland, and areas required for the recharge of groundwater basins;
- **Open space for outdoor recreation**, including, but not limited to, parks and recreational facilities, areas that serve as links between major recreation and open space reservations (such as trails, easements, and scenic roadways), and areas of outstanding scenic and cultural value; and
- **Open space for the protection of Native American sites**, including, but not limited to, places, features, and objects of historical, cultural, or sacred significance, such as Native American sanctified cemeteries, places of worship, religious or ceremonial sites, or sacred shrines located on public property (further defined in Public Resources Code [PRC] Sections 5097.9 and 5097.993).

Substantial deterioration refers to a decline in the quality of a park or facility beyond normal wear and tear.

4.18.2 PHYSICAL ENVIRONMENTAL SETTING

a. Baseline

The baseline for analysis of recreational resources is Spring 2023, which encompasses the recirculated Notice of Preparation public review period.

b. City of Brisbane Recreational Resources

The Brisbane Parks and Recreation Department manages the City's system of parks, trails, and recreational facilities within the city limits. The Brisbane Public Works Department helps to maintain the parks.

Public Parks, Recreational Facilities, and Open Space Areas

The City currently owns 23.45 acres of public parks (including linear parks), recreational lands, and open space and trails within the City, exclusive of the school portions of joint school/park sites, as well as a number of parks and open space areas (see **Table 4.18-1**). Based on an existing population of 4,661 (DOF 2024), Brisbane currently has 5.03 acres of parkland per 1,000 residential population.

The Brisbane Parks and Recreation Department coordinates the use of recreational facilities for Brisbane residents, including a senior center, community pool, ball field, community pool, and several activity/community rooms. The Mission Blue Complex includes a 250-person capacity community center, softball field, tennis court, and sand volleyball court.

Brisbane residents are allowed use of Brisbane Elementary School District (Brisbane ESD) baseball and multi-purpose playing fields, the junior high gymnasium, and other properties owned by the Brisbane ESD through a joint use agreement with the City. The Parks and Recreation Department also provides an extensive collection of classes and workshops geared toward all ages in the community.

Brisbane Marina

The Brisbane Marina, completed in 1983, has a 270-foot guest dock and can house 580 boats ranging in size from 10 feet to 120 feet. The Brisbane Marina is the closest marina to San Francisco and is 7 nautical miles from the Bay Bridge. The marina is home to the Sierra Point Yacht Club, a portion of the San Francisco Bay Trail, and a public 300-foot fishing pier.

Table 4.18-1: Existing Public Parks and Recreational Facilities Serving Brisbane

Name	Location	City-Owned Acres	Improved Acres
Parks		***12.68***	***11.92***
Community Center Park	250 Visitacion Avenue	0.12	0.12
Community Park	5 Old County Road	2.82	2.82
Brisbane Dog Park	50 Park Place	0.54	0.54
Firth Canyon and Park	201 Glen Park Way	0.27	0.27
Fisherman's Park	Brisbane Lagoon	0.25	0.25
Mission Blue Complex	475 Mission Blue Drive	4.95	3.85
Quarry Road Park	399 San Francisco Avenue	0.20	0.20
Tot Lot Playground/Park	4 Solano Street	0.25	0.25
Marina Park	Sierra Point Parkway	3.00	3.00
Skatepark	Old County Road & Park Lane	0.12	0.12
Basketball Courts (2)	Old County Road & Park Lane	0.16	0.16
Tennis Courts (2)	1 Solano Street	School Land	0.34
Recreational Facilities		***1.44***	***1.44***
Brisbane Community Pool	2 Solano Street	0.62	0.62
Childcare Modular	500 San Bruno Avenue	School Land	School Land
Community Center/Library	200 Visitacion Avenue	0.11	0.11
Mission Blue Center	475 Mission Blue Drive	0.65	0.65
Silverspot Cooperative	4 Solano Avenue	0.06	0.06
Open Space and Trails		***9.33***	***9.33***
Costaños Canyon		1.01	1.01
Crocker Trail		5.45	5.45
Firth Canyon		1.68	1.68
Quarry Road Trail		1.19	1.19
TOTAL		**23.45**	**22.69**

SOURCE: City of Brisbane, 2023.

c. Regional and State Recreation Areas

San Francisco Bay Trail

Portions of the San Francisco Bay Trail serve Brisbane residents. The San Francisco Bay Trail is a planned recreational corridor that, when complete, will encircle San Francisco and San Pablo bays with a continuous 500-mile network of bicycling and hiking trails. Currently, a paved portion of the trail extends most of the distance around Sierra Point south of the Baylands. The trail extends farther north along the bay side of the Brisbane Lagoon, providing pedestrian and bicycle access. To the north of the Baylands, a paved portion of the trail runs along the southern edge of Candlestick Point State Recreation Area. A portion of the trail is planned to extend

through the Baylands, connecting Sierra Point with the trail segment at Candlestick Point State Recreation Area.

San Bruno Mountain State and County Park

San Bruno Mountain State and County Park lies roughly three miles west of the Baylands. The rugged 2,326-acre San Bruno Mountain State and County Park was jointly purchased by San Mateo County and the State of California and is managed by the San Mateo County Department of Parks. Additionally, two areas on the north side of the park, Owl Canyon and Buckeye Canyon, are owned by the California Department of Fish and Wildlife. These canyons are approximately 81 acres in combined size and comprise the San Bruno Mountain Ecological Reserve. Both areas are within the San Bruno Mountain Habitat Conservation Plan boundary and consist of permanently protected habitat.

Candlestick Point State Recreation Area

Less than one mile northeast of the Baylands is the Candlestick Point State Recreation Area (Candlestick Point), a 252-acre regional open space. Recreational opportunities include gardening, hiking, jogging, bicycling, birding, fishing, picnicking and a bike path and fitness course. Candlestick Point is a popular entry point for windsurfing on the Bay and is considered by windsurfers to be one of the premier sites in the San Francisco Bay Area. The windsurfing launch site is located on the shoreline of Candlestick Cove near the southern end of the Candlestick Point parking lot, a turnaround known as "Windsurf Circle." According to the San Francisco Boardsailing Association (2014), Candlestick Point is an ideal location for beginning- and intermediate-level windsurfers, because there is very little swell (wave action). These flat-water conditions allow windsurfers to develop skills that are more difficult to master in choppy water. The primary windsurfing area within the Candlestick Point State Recreation Area (identified as the "Area of Interest") is illustrated in **Figure 4.18-1**.

Long-term wind statistics recorded at San Francisco International Airport between 1992 and 2022 indicate that winds from the west-southwest through the northwest are most frequent in the area.

The San Francisco Boardsailing Association considers westerly wind conditions to be generally good for windsurfing at Candlestick Point, with the best conditions during west-northwest winds. The Candlestick Point launch area and windsurfing area are not dependent on tidal conditions and have adequate water depth for safe sailing at low tides. According to the Candlestick Preservation Association (2013), Candlestick Point has an average of 85 "Sailable Days" per year (from April through September), and is frequented, on average, by 20 sailors per Sailable Day.

Figure 4.18-1: Candlestick Point State Recreation Area Primary Windsurfing Area (Area of Interest)

4.18.3 REGULATORY CONTEXT FOR BAYLANDS DEVELOPMENT

a. Federal Laws, Plans, Programs, and Regulations

There are no federal laws, plans, programs, or regulations relevant to the physical environmental effects of open space or recreational facilities.

b. State of California Laws, Plans, Programs, and Regulations

Mitigation Fee Act

The California Mitigation Fee Act, Government Code Sections 66000, et seq., allows cities to establish fees to be imposed upon development projects for the purpose of mitigating impacts that development projects have upon the city's ability to provide specified public facilities.

Quimby Act

The Quimby Act is part of the Subdivision Map Act and authorizes cities to adopt ordinances to require new residential development to dedicate parkland and/or pay in-lieu fees for the purpose of providing parklands and recreational facilities. The Quimby Act establishes a standard for jurisdictions of dedicating 3 acres of parkland per 1,000 residents.

The Quimby Act provides cities and counties with opportunities to improve parks and create new parks using developer-paid Quimby Act fees in areas other than the one in which the developer's subdivision is located if certain requirements are met. These requirements include the following:

- The neighborhood where the city or county is proposing to use the fees to provide parks must have fewer than 3 acres of park area per 1,000 population;
- The neighborhood where the proposed subdivision is located must have at least 3 acres of park area or more per 1,000 population;
- The city or county must hold a public hearing before using the fees in another neighborhood;
- The city or county must find it reasonably foreseeable that the new subdivision's residents will use the park facilities in the other neighborhood; and
- The city or county must use the fees in areas consistent with the city or county's local Quimby Act ordinance and General Plan.

A city or county may also enter into a joint or shared use agreement with one or more public districts to provide additional park and recreational access.

c. Regional Plans and Programs

San Francisco Bay Trail

Senate Bill 100 (1987) states that "The Association of Bay Area Governments (ABAG) shall develop and adopt a plan and implementation program, including a financing plan, for a continuous recreational corridor which will extend around the perimeter of San Francisco and San Pablo Bays. The plan shall include a specific route of a bicycling and hiking trail, the relationship of the route to existing park and recreational facilities, and links to existing and proposed public transportation facilities."

The San Francisco Bay Trail Plan was adopted by ABAG in 1989 and provides for the development of approximately 500 miles of regional hiking and bicycling trails around the perimeter of San Francisco and San Pablo bays, to form a "ring around the Bay." Implementation of roughly half of the total planned length of the Bay Trail has been

coordinated by the Bay Trail Project, a non-profit organization. The bicycle lanes within the existing Sierra Point Parkway are part of the Bay Trail, leaving a gap from the current terminus of Sierra Point Parkway through the Baylands to Brisbane's boundary with San Francisco. Bay Trail Project plans show a future extension through the east side of the Baylands between the current north and south termini of the trail, connecting the bicycle lanes along Sierra Point Parkway with the trail segment at Candlestick Point State Recreation Area.

San Francisco Bay Plan

The Bay Conservation and Development Commission (BCDC) San Francisco Bay Plan recognizes that San Francisco Bay "is the most important open space in the Bay region. The Bay and its shoreline provide unique recreational opportunities. Participating in recreation activities on the Bay and along its shoreline can inspire an appreciation of the Bay and can motivate people to participate in the responsible management and protection of the Bay."

Policies for Recreational Resources

Compliance with the San Francisco Bay Plan requires adherence to the following relevant policies for recreational resources:

1. Diverse and accessible water-oriented recreational facilities, such as marinas, launch ramps, beaches, and fishing piers, should be provided to meet the needs of a growing and diversifying population, and should be well distributed around the Bay and improved to accommodate a broad range of water-oriented recreational activities for people of all races, cultures, ages, and income levels. Periodic assessments of water-oriented recreational needs that forecast demand into the future and reflect changing recreational preferences should be made to ensure that sufficient, appropriate water-oriented recreational facilities are provided around the Bay. Because there is no practical estimate of the acreage needed on the shoreline of the Bay, waterfront parks should be provided wherever possible.
3. Recreational facilities, such as waterfront parks, trails, marinas, live-aboard boats, non-motorized small boat access, fishing piers, launching lanes, and beaches, should be encouraged and allowed by the Commission, provided they are located, improved, and managed consistent with the following standards:
    a. **General Recreational facilities** should:
        (1) Be well distributed around the shores of the Bay to the extent consistent with the more specific criteria below. Any concentrations of facilities should be as close to major population centers as is feasible;
        (2) Not pre-empt land or water area needed for other priority uses, but efforts should be made to integrate recreation into such facilities to the extent that they are compatible;

(3) Be feasible from an engineering viewpoint; and

(4) Be consistent with the public access policies that address wildlife compatibility and disturbance.

In addition:

(5) Different types of compatible public and commercial recreation facilities should be clustered to the extent feasible to permit joint use of ancillary facilities and provide a greater range of choices for users.

(6) Sites, features, or facilities within designated waterfront parks that provide optimal conditions for specific water-oriented recreational uses should be preserved and, where appropriate, enhanced for those uses, consistent with natural and cultural resource preservation.

(7) Access to marinas, launch ramps, beaches, fishing piers, and other recreational facilities should be clearly posted with signs and easily available from parking reserved for the public or from public streets or trails.

(8) To reduce the human health risk posed by consumption of contaminated fish, projects that create or improve fishing access to the Bay at water-oriented recreational facilities, such as fishing piers, beaches, and marinas, should include signage that informs the public of consumption advisories for the species of Bay fish that have been identified as having potentially unsafe levels of contaminants.

(9) Complete segments of the Bay and Ridge Trails where appropriate, consistent with Policy 4-a-6 (see below).

e. **Non-Motorized Small Boats**.

(1) Where practicable, access facilities for non-motorized small boats should be incorporated into waterfront parks, marinas, launching ramps and beaches, especially near popular waterfront destinations.

(2) Access points should be located, improved and managed to avoid significant adverse effects on wildlife and their habitats, should not interfere with commercial navigation, or security and exclusion zones or pose a danger to recreational boaters from commercial shipping operations, and should provide for diverse, water-accessible overnight accommodations, including camping, where acceptable to park operators.

(3) Sufficient, convenient parking that accommodates expected use should be provided at sites improved for launching non-motorized small boats. Where feasible, overnight parking should be provided.

(4) Site improvements, such as landing and launching facilities, restrooms, rigging areas, equipment storage and concessions, and educational programs that address navigational safety, security, and wildlife compatibility and disturbance should be provided, consistent with use of the site.

(5) Facilities for boating organizations that provide training and stewardship, operate concessions, provide storage or boathouses should be allowed in recreational facilities where appropriate.

(6) Design standards for non-motorized small boat launching access should be developed to guide the improvement of these facilities. Launch facilities should be accessible and designed to ensure that boaters can easily launch their watercraft. Facilities should be durable to minimize maintenance and replacement costs.

f. Fishing Piers. Fishing piers should not block navigation channels, nor interfere with normal tidal flow.

4. To assure optimum use of the Bay for recreation, the following facilities should be encouraged in waterfront parks and wildlife refuges.

a. **In waterfront parks**.

(1) Where possible, parks should provide some camping facilities accessible only by boat and docking and picnic facilities for boaters.

(2) To capitalize on the attractiveness of their bayfront location, parks should emphasize hiking, bicycling, riding trails, picnic facilities, swimming, environmental, historical and cultural education and interpretation, viewpoints, beaches, and fishing facilities. Recreational facilities that do not need a waterfront location, e.g., golf courses and playing fields, should generally be placed inland, but may be permitted in shoreline areas if they are part of a park complex that is primarily devoted to water-oriented uses, or are designed to provide for passive use and enjoyment of the Bay when not being used for sports.

(3) Where shoreline open space includes areas used for hunting waterbirds, public areas for launching non-motorized small boats should be provided so long as they do not result in overuse of the hunting area.

(4) Public launching facilities for a variety of boats and other water-oriented recreational craft, such as kayaks, canoes, and sailboards, should be provided in waterfront parks where feasible.

(5) Except as may be approved pursuant to recreation policy 4-b,[366] limited commercial recreation facilities, such as small restaurants, should be permitted within waterfront parks provided they are clearly incidental to the park use, are in keeping with the basic character of the park, and do not obstruct public access to and enjoyment of the Bay. Limited commercial development may be appropriate (at the option of the park agency responsible) in all parks shown on the Plan maps except where there is a specific note to the contrary.

(6) Trails that can be used as components of the San Francisco Bay Trail, the Bay Area Ridge Trail, or links between them should be developed in waterfront parks. San Francisco Bay Trail segments should be located near the shoreline unless that alignment would have significant adverse effects on Bay resources; in this case, an alignment as near to the shore as possible, consistent with Bay resource protection, should be provided. Bay Area Ridge Trail segments should be developed in waterfront parks where the ridgeline is close to the Bay shoreline.

(7) Bus stops, kiosks, and other facilities to accommodate public transit should be provided in waterfront parks to the maximum extent feasible. Public parking should be provided in a manner that does not diminish the park-like character of the site. Traffic demand management strategies and alternative transportation systems should be developed where appropriate to minimize the need for large parking lots and to ensure parking for recreation uses is sufficient.

(8) Interpretive information describing natural, historical, and cultural resources should be provided in waterfront parks where feasible.

(9) In waterfront parks that serve as gateways to wildlife refuges, interpretive materials and programs that inform visitors about the wildlife and habitat values present in the park and wildlife refuges should be provided. Instructional materials should include information about the potential for adverse impacts on wildlife, plant and habitat resources from certain activities.

(10) The Commission may permit the placement of public utilities and services, such as underground sewer lines and power cables, in recreational facilities provided they would be unobtrusive, would not permanently disrupt use of the site for recreation, and would not detract from the visual character of the site.

[366] Recreation Policy 4-b addresses waterfront parks and wildlife refuges with historic buildings and would not apply to Baylands development.

5. Bay resources in waterfront parks and, where appropriate, wildlife refuges should be described with interpretive signs. Where feasible and appropriate, waterfront parks and wildlife refuges should provide diverse environmental education programs, facilities and community service opportunities, such as classrooms and interpretive and volunteer programs.

7. Because of the need to increase the recreational opportunities available to Bay Area residents, small amounts of Bay fill may be allowed for waterfront parks and recreational areas that provide substantial public benefits and that cannot be developed without some filling.

Policies for Public Access

Relevant public access policies include the following:

A proposed fill project should increase public access to the Bay to the maximum extent feasible, in accordance with the policies for Public Access to the Bay.

In addition to the public access to the Bay provided by waterfront parks, beaches, marinas, and fishing piers, maximum feasible access to and along the waterfront and on any permitted fills should be provided in and through every new development in the Bay or on the shoreline, whether it be for housing, industry, port, airport, public facility, wildlife area, or other use, except in cases where public access would be clearly inconsistent with the project because of public safety considerations or significant use conflicts, including unavoidable, significant adverse effects on Bay natural resources. In these cases, in lieu access at another location, preferably near the project, should be provided. If in lieu public access is required and cannot be provided near the project site, the required access should be located preferably near identified vulnerable or disadvantaged communities lacking well-maintained and convenient public access in order to foster more equitable public access around the Bay Area.

Public access to some natural areas should be provided to permit study and enjoyment of these areas. However, some wildlife are sensitive to human intrusion. For this reason, projects in such areas should be carefully evaluated in consultation with appropriate agencies to determine the appropriate location and type of access to be provided.

Public access should be sited, designed and managed to prevent significant adverse effects on wildlife. To the extent necessary to understand the potential effects of public access on wildlife, information on the species and habitats of a proposed project site should be provided, and the likely human use of the access area analyzed. In determining the potential for significant adverse effects (such as impacts on endangered species, impacts on breeding and foraging areas, or fragmentation of wildlife corridors), site specific information provided by the project applicant, the best available scientific evidence, and expert advice

should be used. In addition, the determination of significant adverse effects may also be considered within a regional context. Siting, design and management strategies should be employed to avoid or minimize adverse effects on wildlife, informed by the advisory principles in the Public Access Design Guidelines. If significant adverse effects cannot be avoided or reduced to a level below significance through siting, design and management strategies, then in lieu public access should be provided, consistent with the project and providing public access benefits equivalent to those that would have been achieved from on-site access. Where appropriate, effects of public access on wildlife should be monitored over time to determine whether revisions of management strategies are needed.

Public access that substantially changes the use or character of the site should be sited, designed, and managed based on meaningful community involvement to create public access that is inclusive and welcoming to all and embraces local multicultural and indigenous history and presence. In particular, vulnerable, disadvantaged, and/or underrepresented communities should be involved. If such previous outreach and engagement did not occur, further outreach and engagement should be conducted prior to Commission action.

Public access should be sited, designed, managed, and maintained to avoid significant adverse impacts from sea level rise and shoreline flooding.

Whenever public access to the Bay is provided as a condition of development, on fill or along the shoreline, access should be permanently guaranteed. This should be done wherever appropriate by requiring dedication of fee title or easements at no cost to the public, in the same manner that streets, park sites, and school sites are dedicated to the public as part of the subdivision process in cities and counties. Any public access provided as a condition of development should either be required to remain viable in the event of future sea level rise or flooding, or equivalent access consistent with the project should be provided nearby.

Public access improvements provided as a condition of any approval should be consistent with the project, the culture(s) of the local community, and the physical environment, including protection of Bay natural resources, such as aquatic life, wildlife and plant communities, and provide for the public's safety and convenience. The improvements should be designed and built to encourage diverse Bay-related activities and movement to and along the shoreline, should provide barrier free access for persons with disabilities, for people of all income levels, and for people of all cultures to the maximum feasible extent, should include an ongoing maintenance program, and should be identified with appropriate signs, including using appropriate languages or culturally relevant icon-based signage.

In some areas, a small amount of fill may be allowed if the fill is necessary and is the minimum absolutely required to develop the project in accordance with the Commission's public access requirements.

Roads near the edge of the water should be designed as scenic parkways for slow-moving, principally recreational traffic. The roadway and right-of-way design should maintain and enhance visual access for the traveler, discourage through traffic, and provide for safe, separated, and improved physical access to and along the shore. Public transit use and connections to the shoreline should be encouraged where appropriate.

San Mateo County Trails Plan

The San Mateo County Trails Plan provides guidelines for trail planning, design, and trail management in cities and parks within San Mateo County. The trail design and management guidelines primarily pertain to the construction of new trails and address long-term management activities for existing trails. Policies relevant to protection of biological resources are as follows:

6.4.1 – Locate, design, and develop trail routes with sensitivity to their potential environmental, recreational and other impacts on adjacent lands, private property, and utilities.

6.4.2 – Levels-of-use and types-of-use on trails shall be controlled to avoid unsafe use conditions or risk severe environmental degradation.

6.4.7 – Locate trails to recognize the resources and hazards of the areas they traverse, and to be protective of sensitive habitat areas such as estuaries, wetlands, riparian corridors, erodible soils, and other areas where sensitive species may be adversely affected.

6.4.8 – Develop design guidelines to ensure that sensitive species and the habitats they rely on shall be protected, and where possible, enhanced by trail development and trail use.

6.29.4 – Develop a monitoring program for use by the lead agency in evaluating current conditions and determining whether or not new trails or trail management programs (including maintenance, reconstruction, education, and use regulations) are effective in addressing user conflicts, safety issues, and environmental impacts.

d. City of Brisbane Plans, Ordinances, and Regulations

General Plan

Land Use Element

A minimum of 25 percent of the Specific Plan's land area[367] of the Baylands is required to be provided in open space and/or open area.

Open Space Element

Park Definitions and Standards

The Open Space Element defines the following types of parks.

- **Mini Park —** small-scale outdoor areas for limited public or private park and recreation uses.
- **Neighborhood Park —** public areas of at least 0.5 acres for a range of recreational activities, such as field games, court and playground games, crafts, or picnicking, including school/park facilities.
- **Linear Park —** long, narrow areas used for one or more varying modes of recreational travel, such as hiking, biking, or horseback riding, including built or natural corridors, such as utility rights of way fire roads and canyons.
- **Combined Standard for Mini Parks, Neighborhood Parks, and Linear Parks:**
    - Minimum of 10.5 acres per 1,000 residential population, representing continuation of the 1994 existing level of service.
- **Community Park —** a public area of at least 2 acres in size serving the residential and business communities, such as outdoor community gathering places or multi-use recreational complexes.
    - Standard for Community Parks: Minimum of 8 acres per 1,000 residential population, representing the top of the range of the National Recreation and Park Association (NRPA) standard.

[367] For purposes of this EIR, the "land area" used to determine the portion of the Specific Plan devoted to open space use excludes those areas subject to daily inundation due to tidal action based on anticipated sea level rise through the Year 2100 (approximately 83 inches). Privately owned facilities that would be open only to Baylands residents, workers, and their guests are considered to be "open areas" and are not included in determining the amount of open space provided by the Specific Plan.

- **Special Recreational Use —** A structure for specialized or single purpose recreational activities.
    - Standard for Special Recreational Use: To be determined by City facilities study.
- **Conservancy —** An area of protected and managed natural /cultural resources.
    - Standard for Conservancy: 66 acres per 1,000 residential population, representing existing, Northeast Ridge dedication, and 40 percent conservation of the "Brisbane Acres" per the HCP.

Relevant Policies and Programs

The Open Space Element contains the following relevant policies and programs:

Policy 81: The City shall conduct an ongoing effort to identify sites or portions of sites having particular value as open space, wildlife habitat, wetlands, or other environmental qualities that should be preserved and protected. In such cases, the City shall explore the feasibility of acquisition of these areas by the City or by other public or private agencies that are engaged in the ownership and preservation of open space, and, when legally possible, imposing a requirement that such areas be dedicated by the owner to the public for open space purposes.

Policy 81.1: Work to preserve open space lands to protect the natural environment and to provide outdoor educational and recreational opportunities consistent with the sensitivity of the resource.

Policy 82: Encourage the preservation, conservation and restoration of open space to retain existing biotic communities, including rare and endangered species habitat, wetlands, watercourses and woodlands.

Policy 85: Encourage the preservation and conservation of aquatic resources in Brisbane: the Lagoon, the Bayfront and the Marsh.

Program 85a: Seek opportunities to utilize aquatic areas for recreational and educational activities consistent with the sensitivity of the resource.

Program 85b: Develop provisions in the Zoning Ordinance, including setback requirements, to protect the natural ecology of aquatic resources.

Program 85d: Work with responsible agencies, property owners and environmental and conservation groups to ensure preservation of aquatic ecosystems.

Policy 86: Provide access to natural areas consistent with the nature of the resource.

Program 86a: Develop and maintain a network of trails and pathways throughout the City to provide appropriate access to open space and to link City trails with County and regional trail systems.

Program 86b: Extend the trail system to include aquatic areas and provide access to public transportation systems.

Program 86c: Examine the potential to extend a pedestrian and bicycle trail between Sierra Point and the Candlestick Recreation Area along the Bay to the east of US 101 in cooperation with regional efforts to obtain the same objective.

Policy 87: Maintain parks and open space to serve the community equivalent to or greater than the acreage/population standards set by the National Recreation and Parks Association.

Program 87a: Use the standards in Table 6 as guidelines for the provision of parks and open space for the community.

Policy 88: Develop parks to maximize passive recreational opportunities.

Program 88c: Require impact fees or exactions as contributions to the acquisition, development and maintenance of passive open space, park and recreation facilities in conjunction with the mitigation requirements for development projects.

Policy 89: Work with local employers to preserve open space and to develop outdoor open areas that would benefit employees as well as residents during and after the work day.

Policy 91: Explore the widest range of options for preserving open space lands, including acquisition, dedication, and exactions on development projects.

Program 91b: In conjunction with all new development and the redevelopment of existing uses, where appropriate, require dedication of lands with habitat or other natural resource value to remain as open space and/or in-lieu fees for open space acquisition.

Recreation and Community Services Element

The Recreation and Community Services Element contains the following relevant policies and programs:

Policy 95: Provide recreational facilities that accommodate community activities, meet national standards, are accessible in accordance with State and National standards, and contain the necessary components for multiple uses and community enjoyment.

Policy 96: Condition, as appropriate, new developments to construct, maintain or provide for new recreational facilities, amenities and opportunities.

Policy 97: Encourage the development of private sector recreational facilities, such as commercial playing fields, bowling alleys, health clubs, performing arts facilities and theaters.

Policy 98: Maximize the extended use of existing public facilities for year-round and evening activities.

Policy 99: For all recreational facilities, consider the inclusion of restrooms, drinking fountains, pay phones, security lighting, adequate parking, storage, facilities for trash recycling and, where appropriate, food preparation and/or vending/concession facilities.

Policy 100: Investigate opportunities for joint public-private development of commercial recreational facilities.

Program 100c: Encourage new commercial development and renovation to include shower and locker room facilities in order to promote employees' physical fitness, encourage use of public and private recreational opportunities in the community, and reduce dependence on the automobile for transportation.

Policy 132: Recognize the importance of the Brisbane Lagoon and the Levison Marsh as wildlife habitats, valuable community resources and drainage basins, and cooperate with responsible agencies in their conservation.

Policies and Programs by Subarea – Baylands

Policy BL.1 D: Each increment of development shall be provided with appropriate transportation related and other infrastructure, facilities, and site amenities as determined by the City. Such transportation related and other infrastructure, facilities, and site amenities (e.g., parks, open space preservation, habitat enhancement) shall be provided at the developer's cost.

Policy BL.4: Maximize opportunities for open space and recreational uses in any land use planning for this subarea [Brisbane Baylands].

Policy BL.15: Cooperate with other agencies to develop the Bay Trail between Sierra Point and the Candlestick Recreation Area.

Policy BL.17: After the water environment is determined to be safe for public access, develop public water-related passive recreation at the Brisbane Lagoon, with due concern for the preservation and enhancement of the wetlands.

Policy BL.18: Develop a public pathway and access facilities immediately adjacent to the Lagoon.

Policy BL.20: Dedicate land area for open space, recreational uses and wetlands restoration, especially around the Lagoon.

City of Brisbane Open Space Plan

The *Brisbane Open Space Plan* is intended to function as a working tool to guide implementation of the policies and programs of the City of Brisbane General Plan. One of the purposes of the Open Space Plan is to provide a comprehensive map of vacant lands and identify open space potential through the possibility of land acquisition by evaluating natural resources, amenities, and the open space value of parcels. The Open Space Plan presents an analysis of open space resources in six subareas of the city, including the Baylands and Beatty subareas that encompass the majority of the Specific Plan area.

The Open Space Plan recommends that areas south of the drainage channel and north of Lagoon Way "be maintained in a way that maximizes open area." It also recommends that Icehouse Hill be kept largely as open area or dedicated open space. The Beatty Subarea is completely developed except for a triangular, 0.51-acre parcel near US Highway 101. The Open Space Plan recommends that this parcel remain an open space/open area.

Brisbane Municipal Code

Brisbane Municipal Code Sections 16.24.010-16.24.070 authorize the City to require Quimby Act dedications to "provide for adequate and appropriate recreational facilities," defining the amount of land needed by setting a standard of 3.0 acres per 1,000 residents, assuming 2.35 persons per dwelling unit.

4.18.4 RELEVANT SPECIFIC PLAN PROVISIONS

The Specific Plan provides for development of a 157-acre open space/area system, including 64.8 acres of parks (see **Figure 4.18-2** and **Table 4.18-2**). See Section 3.3.2d for a detailed description of the Specific Plan's proposed open space/area system. The Specific Plan's proposed phasing for improvement of this open space/area system is summarized in **Table 4.18-2**.

Figure 4.18-2: Baylands Specific Plan Proposed Open Space/Open Area Network

Table 4.18-2: Baylands Specific Plan Open Space/Open Area and Park Areas

	Acreage	Open Space Functions	Open Space Types and Acreage	
Urban Plazas				
Bayshore Station Plaza	1.4	Gathering place for Caltrain riders, including seating, public art, and information signage.	Park	1.4
Active Recreation Areas				
Community Fields	7.4	Recreational lawn and youth sports field(s), picnicking, playground, fitness path, dog park.	Park	7.4
Bay Trail	20.0	Extension of the San Francisco Bay Trail for use by pedestrians and bicyclists.	Park	20.0
Community Greens				
Baylands Park	5.8	Passive recreation, dog park, formal and natural gardens.	Park	5.8
Sunnydale Park	0.8	Passive recreation, gathering place.	Park	0.8
Roundhouse Park	3.9	Passive recreation, historic preservation, outdoor dining and picnicking, gathering place.	Park	3.9
Ecological Greenspaces				
Lagoon Park	15.4	Habitat restoration and enhancement, trails, passive recreation.	Park Resource Conservation	5.3 10.1
The Ecological Park	7.3	Habitat restoration and enhancement, stormwater treatment, trails, picnicking.	Park	7.3
Visitacion Creek	30.8	Habitat restoration and enhancement, trails.	Park Resource Conservation	3.1 27.7
Icehouse Hill	24.3	Habitat restoration and enhancement, trails.	Park Resource Conservation Managed Production of Resources	2.1 21.8 0.4
Baylands Preserve	14.1	Habitat connectivity, restoration, and enhancement; trails.	Park Resource Conservation	7.7 6.4
Stormwater Detention	13.8	Stormwater detention, water quality management.	Public Safety	13.8
Green Edges				
West Rail Trail	8.5	Habitat connectivity, integrated stormwater treatment.	Resource Conservation	8.5
East Rail Green Edge	3.5	Habitat restoration and enhancement, visual screening.	Resource Conservation	3.5
OPEN SPACE/OPEN AREA TOTAL	**157.0**		**Parkland** **Resource Conservation** **Public Safety** **Managed Production of Resources**	**64.8** **78.0** **13.8** **0.4**

SOURCE: Baylands Specific Plan, 2023; Metis Environmental Group.

4.18.5 SIGNIFICANCE CRITERIA

The following criteria were used to determine the significance of recreational resources impacts.

Threshold REC-1: The Baylands Specific Plan would cause a significant impact if the increased population resulting from Baylands development would increase the use of existing public parks or community recreational facilities such that substantial physical deterioration would occur or be accelerated.

Threshold REC-2: The Baylands Specific Plan would cause a significant impact if it would either:

- **Reduce wind speeds or increase turbulence within the Candlestick Point State Recreational Area that would adversely affect windsurfing in prime windsurfing areas; or**
- **Substantially impair access to existing launch sites or access from existing launch sites to prime windsurfing areas.**

4.18.6 PROJECT IMPACTS AND MITIGATION MEASURES

a. Impact REC-1: Physical Deterioration of a Park or Recreational Facility

Methodology for Determining Significance

The analysis considers the extent to which the approximate doubling of Brisbane's population resulting from the Specific Plan project would increase the use of existing Brisbane parks and recreation facilities as well as the physical effects of such increased use. To determine the significance of Impact REC-1, three factors are considered:

1. Acreage of publicly accessible parkland;
2. Availability of community recreational facilities within and outside of publicly accessible park lands; and
3. Availability of parkland acreage and community recreational facilities provided within the Baylands to serve Baylands residents.

The acreage of publicly accessible parkland to be provided in the Specific Plan is compared to the ratio of publicly accessible parkland per 1,000 residents currently available within Brisbane. If the Specific Plan provides as much or more publicly accessible parkland per 1,000 residents as is currently available within Brisbane (5.03 acres per 1,000 population), Baylands development would not increase per capita use of existing parkland within Brisbane and deterioration of parklands would not occur.

Conversely, if the Specific Plan would provide less parkland per 1,000 residents than is currently available in Brisbane, Baylands development would increase per capita use of existing parkland, resulting in overuse and deterioration of existing facilities, which were not designed to serve a population twice the City's existing size. Substantial physical deterioration is recognized as a decline in the quality of current conditions of a park or facility beyond regular wear and tear.

Because the Specific Plan's phasing program does not tie the provision of Baylands park facilities to its residential development, the analysis examines parkland availability within the Baylands at various stages of development, including buildout of Baylands housing, completion of Phase 1 (area west of Caltrain), and Specific Plan buildout.

The analysis also recognizes that Brisbane's existing inventory of park and recreational facilities consists not only of park acreage but also includes community recreational facilities such as a community center and meeting rooms, active sports fields, tennis courts, basketball courts, volleyball courts, skateboard facilities, and a pool. Depending on the types and extent of recreational facilities that would be provided by the Specific Plan to accommodate its projected 4,905 residents, overuse of existing community recreational facilities could occur that would result in substantial deterioration.

Impact Assessment

As indicated in Chapter 3, *Project Description*, the Baylands Specific Plan provides for 157 acres of open space/open area, including active recreation areas, community greens, urban plazas, community greens, and ecological greenspaces and green edges (see **Figure 3-13**). As indicated in **Table 4.18-2**, approximately 43.6 percent of this open space/open area would be devoted to parks and recreational uses (64.8 acres). The other 56.4 percent would be devoted to resource conservation (78.0 acres of habitat conservation), public safety (13.8 acres of stormwater detention), and managed production of resources (0.4-acre Mission Blue native plant nursery).

The 2,200 dwelling units proposed by the Baylands Specific Plan would generate a resident population of approximately 4,905 and be served by 64.8 acres of park facilities (13.2 acres per 1,000 population). In 2023, 4,661 Brisbane residents were served by 23.45 acres of parkland (5.03 acres per 1,000 population).

The Specific Plan's 64.8-acres of parks and trails per 1,000 population (13.2) is substantially more than is currently available to Brisbane residents and would increase the City's existing 5.03 acres per 1,000 population of parkland available to Brisbane residents to 9.2 acres per 1,000 residents throughout the City and the Baylands at Specific Plan buildout. However, as indicated in **Table 4.18-3** and **Table 4.18-4**, the Specific Plan ties only 26.6 of its 64.8 acres of parkland to the buildout of housing within the Baylands (41.0 percent). At Phase 1 Specific Plan buildout (area west of Caltrain), a total of 5.9 acres of parkland per 1,000 population would be completed. With issuance of building permits for 50 percent of the permitted commercial development east

of Caltrain an additional 23.1 acres of parkland would be completed. The final 13.0 acres of parkland would be completed when building permits are issued for 75 percent of permitted commercial development east of Caltrain. The timing for completion of park and trail improvements is dependent on the phased completion of final landfill closure.

Table 4.18-3: Proposed Timing of Baylands Open Space/Area and Park Improvements

Open Space/Area Facility	Acreage		Proposed Timing for Completion
	Total	Park	
Sunnydale Park	0.8	0.8	Concurrent with development of surrounding land uses in the Bayshore District.
Baylands Park (north of Geneva Avenue)	2.9	2.9	
Bayshore Station Plaza	1.4	1.4	
Baylands Park (south of Geneva Avenue)	2.9	2.9	Concurrent with development of surrounding land uses in the Roundhouse District.
Roundhouse Park	3.9	3.9	
Ecological Park (north of Main Street)	3.7	3.7	
Ecological Park (south of Main Street)	3.6	3.6	Concurrent with development of surrounding land uses in the Icehouse Hill District.
Community Fields	7.4	7.4	Prior to issuance of an occupancy permit for the 1,001st dwelling unit.
West Rail Trail and connection to the adjacent Crocker Park Recreational Trail	8.5	—	
Icehouse Hill Habitat Enhancement and Restoration; Recreational Facilities	24.3	2.1	Prior to issuance of an occupancy permit for commercial development exceeding 4.0 million square feet west of Caltrain.
Stormwater Detention Area	13.8	—	Concurrent with start of building construction.
Visitacion Creek	30.8	3.1	Must be completed prior to approval of any building permit exceeding 1.25 million square feet within the Campus East District.
Bay Trail	20.0	20.0	
Lagoon Park	15.4	5.3	Must be completed prior to approval of any building permit exceeding 2.0 million square feet within the Campus East District.
Baylands Preserve	14.1	7.7	
East Rail Trail Green Edge	3.5	—	No timing requirement specified.
TOTAL	**157.0**	**64.8**	

SOURCE: Baylands Specific Plan, 2025.

Significance Conclusion for Impact REC-1

The 13.2 acres per 1,000 population (64.8 acres) of parks and trail facilities provided by the Baylands Specific Plan exceeds the current 5.03 acres per 1,000 population available to Brisbane residents. While new Baylands residents would be able to use existing City parks, existing Brisbane residents would also be able to use the Baylands parks identified in **Table 4.18-2**. By providing substantially more parkland per 1,000 population than is currently available to Brisbane residents, Baylands development would not result in overuse of existing neighborhood and community park acreage such that substantial physical deterioration of existing facilities in Brisbane would occur or be accelerated.

A less than significant impact would therefore result.

Table 4.18-4: Phasing of Park Acreage per 1,000 Population

Park/Trail	Acres	Baylands Park Acreage at:			
		Residential Buildout	4.0 million s.f. of Commercial west of Caltrain	1.25 million s.f. of Commercial east of Caltrain	2.0 million s.f. of Commercial east of Caltrain
Sunnydale Park	0.8	0.8			
Baylands Park	5.8	5.8			
Bayshore Station Plaza	1.4	1.4			
Roundhouse Park	3.9	3.9			
Ecological Park	7.3	7.3			
Community Fields	7.4	7.4			
Icehouse Hill	2.1		2.1		
Visitacion Creek	3.1			3.1	
Bay Trail	20.0			20.0	
Lagoon Park	5.3				5.3
Baylands Preserve	7.7				7.7
SUBTOTAL	**64.8**	**26.6**	**2.1**	**23.1**	**13.0**
CUMULATIVE TOTAL ACREAGE		**26.6**	**28.7**	**51.8**	**64.8**
ACRES/1,000 POPULATION	**13.2**	**5.4**	**5.9**	**10.6**	**13.2**

Program EIR Mitigation Measures

The Program EIR did not propose any mitigation measures addressing the impacts on existing recreational facilities.

b. Threshold REC-2: Physical Deterioration of Candlestick Point Windsurfing Resources

Methodology for Determining Significance

Because windsurfing and related recreational activities rely on wind for lift/drag force for propulsion, generally strong and consistent (low fluctuations/turbulence) winds are generally preferred for wind- and kite-surfing enthusiasts since they allow for greater exhilaration and better maneuverability. While a definition of a "Sailable Day" is available, there are no generally accepted significance criteria for changes in wind conditions that might be caused by a proposed development project. Thus, impacts on windsurfing activities within the Candlestick Point State Recreation Area are analyzed in terms of changes in average wind speeds and turbulence levels that would result from Baylands development, compared to the existing conditions.

Wind Assessment Approach

The Wind Assessment undertaken for the Baylands Specific Plan (RWDI 2023) (see Appendix O) provides a quantitative assessment of existing wind speeds and turbulence, wind speeds and turbulence with Baylands development, and wind speeds and turbulence with Baylands and cumulative project development. The assessment is based on Computational Fluid Dynamics (CFD) simulations of wind flows in a virtual model of the Baylands and adjacent lands to the north.

Of the 16 major wind directions, three directions—west, west by northwest, and northwest—were simulated in order to understand the range of possible flow conditions that would result from Baylands development and are the three wind directions considered in determining a "Sailable Day." West-southwest winds, although more prevalent than northwest winds, were not simulated because the Baylands and cumulative development sites are not generally upwind from the primary windsurfing area for winds from this direction.

Wind conditions were analyzed using a Large Eddy Simulation[368] approach that allows for the prediction of mean wind flows as well as the effect of transient phenomena such as wind gusts. Simulations were run to acquire statistically significant predictions of an equivalent mean value which was normalized by the reference speed (a wind speed measured at a high elevation that is not affected by ground level structures).

Average wind speeds from the long-term meteorological data were applied to the velocity ratios generated from the flow simulations to generate a map of average wind speeds over the primary windsurfing area east of the Baylands.

Three-dimensional computer models were constructed to include the terrain and building features present in an area spanning approximately 3.5 miles from north to south and 3 miles from west to east. The level of details in the model reflects the expected influence that the terrain and built environment may have on wind conditions east of the Baylands. The effects of terrain were also considered in the model by applying appropriate input conditions (wind profile and turbulence conditions) for each wind direction being analyzed.

Simulations were completed for three development scenarios:

- **Existing** site and surroundings
- **Baylands** development with the existing surrounding conditions
- **Cumulative** development, including the Baylands and cumulative projects identified in **Table 7-2**[369]

[368] Large Eddy Simulation is a mathematical model for turbulence used in computational fluid dynamics and to simulate atmospheric air currents. It is used in a wide variety of engineering applications, including combustion, acoustics, and simulations of air flow.

[369] Cumulative windsurfing impact analysis can be found in EIR Section 7.3.16.

Each of these development scenarios was analyzed for:

- **Predominant wind directions**,[370] including Westerly (W, 270°), Westerly-Northwesterly (WNW, 292.5°), and Northwesterly (NW, 315°) winds; and
- **Vertical distance above the water surface**,[371] including 5 feet, 10 feet, 16 feet, 32 feet, and 82 feet above the surface of the Bay.

Effects of Wind Speed on Water-Related Recreation

Wind speed effects on water-related recreational uses of Candlestick Point State Recreation Area shoreline and the Bay vary with the specific use. While there appear to be no specific criteria for minimum wind speeds to support "good" sailing, windsurfing, and the like, wind speeds of 13 mph or more are usually considered desirable for wind-powered activities, such as paragliding and hang-gliding, and apply to windsurfing as well; for highly skilled windsurfers, the more wind in the sailing area, the better. Wind is necessary to launch and land, but if winds at the launch site are too strong, beginning- and intermediate-level windsurfers could find it difficult to do either. Wind direction is also important to windsurfing, in that an adverse wind direction can make it more difficult to launch the board, to reach a desirable sailing area, or to return safely to the launch site.

California Environmental Quality Act (CEQA) Guidelines provide no specific criteria to assess necessary or optimal wind conditions to support windsurfing, and preferences for wind conditions may vary according to the skill level and objectives of the individual windsurfer. For the purposes of this analysis, however, the criteria listed in Threshold REC-2 above are applied to the Candlestick Point State Recreation Area windsurfing resource. Thus, a significant impact would occur if Baylands development would substantially degrade the windsurfing resource by reducing wind speeds or increasing turbulence to an extent that would adversely affect windsurfing in the primary windsurfing area east of the Baylands, south of Candlestick Point.

Effects on Existing Candlestick Point Launch Sites

In addition to effects on wind speed and turbulence within the primary windsurfing area, Baylands development would adversely affect Candlestick Point recreational resources if it would substantially impair access to existing launch sites or access from those sites to the primary windsurfing area. Analysis is therefore undertaken to determine whether Baylands

[370] Given the area's dominant prevailing wind patterns and the location of the Baylands and future cumulative projects in relation to San Francisco Bay, Westerly (W, 270°), Westerly-Northwesterly (WNW, 292.5°) and Northwesterly (NW, 315°) winds were determined to have the highest potential for wind impact and were therefore analyzed for potential impacts on water-related recreational activities.

[371] Five feet above the Bay's water surface was used for impact analysis since it is generally representative of the elevation of a windsurfer's sail. In addition, because existing winds are stronger at distances greater than 5 feet above the Bay's water surface, areas affected by Baylands and cumulative development would generally be smaller in comparison to impacts experienced at 5 feet above the Bay's water surface.

development would impair access to existing Candlestick Point windsurfing launch sites. In addition, changes in wind speed and turbulence adjacent to launch sites to determine whether Baylands development would impact access from launch sites to the primary windsurfing area.

Impact Assessment

Wind Speed

With the addition of the Specific Plan development, overall wind conditions within the Candlestick Point windsurfing area east of the Baylands would remain comparable to existing conditions, with average wind speeds slightly reduced in the vicinity of the shorelines downwind of Baylands. Changes in wind speed with the most prevalent west (W) winds can be seen in **Figure 4.18-3a** and **Figure 4.18-3b**. As can be seen, Baylands development would reduce the average wind speeds by 1 to 2 mph about 300 yards downwind of the site within the Candlestick Point windsurfing area. The effect of Baylands development on wind speed would dissipate farther from shore.

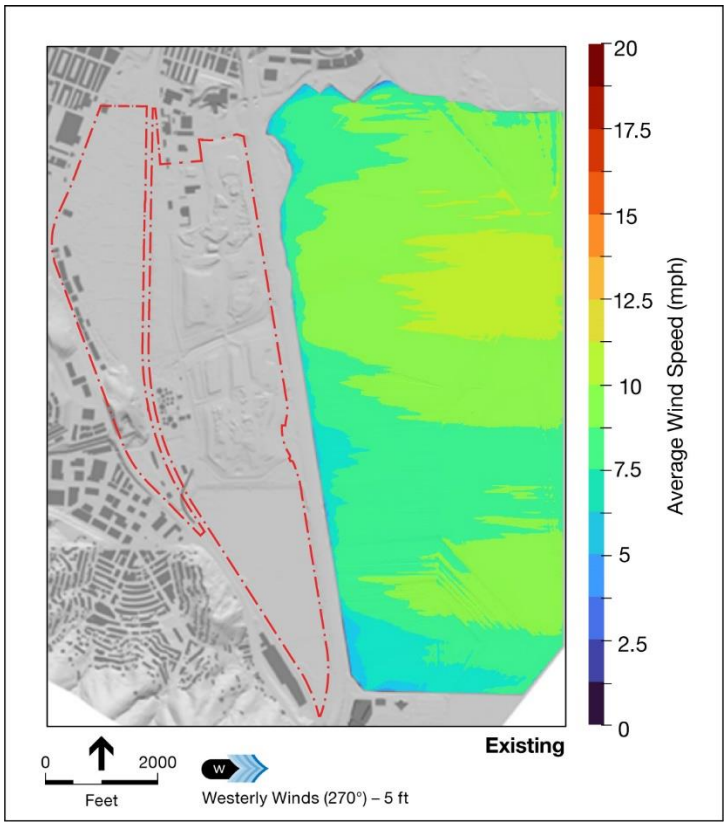
Similarly, in the case of west-northwest (WNW) winds (see **Figure 4.18-4a** and **Figure 4.18-4b**), Baylands development would reduce the average wind speeds by 1 to 1.5 mph about 300 yards downwind of the site within the Candlestick Point windsurfing area.

During northwest (NW) winds (see **Figure 4.18-5a** and **Figure 4.18-5b**), Baylands development would result in some moderate decrease in wind speeds farther from shore, particularly in the southern part of the windsurfing area. However, this decrease in wind speed would be small, on the order of 1 to 1.5 mph. This decrease in wind speed would likely not be perceptible to recreational users, particularly since northwesterly winds occur only about 5 percent of the time and are generally not as strong as the other two wind directions that were simulated.

Turbulence

Wind fluctuations (turbulence) would increase to a small degree, with the greatest effect anticipated downwind of the tallest Baylands buildings and those closest to the shoreline, similar to influenced areas presented for average wind speeds (about 300 yards from the shoreline). In case of W winds (see **Figure 4.18-6a** and **Figure 4.18-6b**), average wind fluctuations would increase by about 0.5 to 1 mph close to the shoreline. For both WNW and NW winds (see **Figure 4.18-7a**, **Figure 4.18-7b**, **Figure 4.18-8a**, and **Figure 4.18-8b**), the Specific Plan's effect on turbulence would be comparable to W winds but would occur closer to the shoreline and extend farther south.

Figure 4.18-3a: Existing and With-Project Wind Speed, Westerly Winds



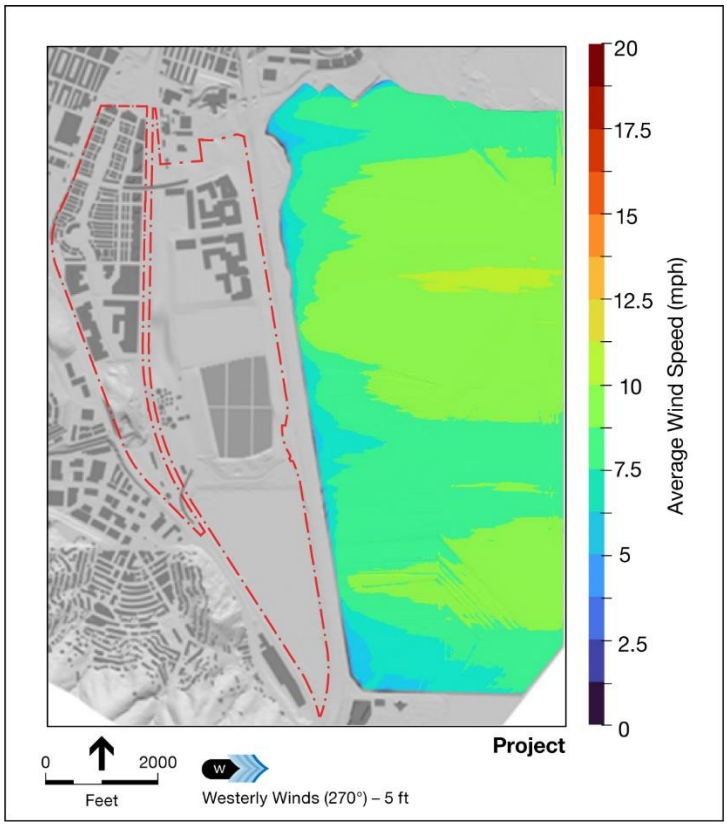


Figure 4.18-3b: Changes in Wind Speed With Project, Westerly Winds

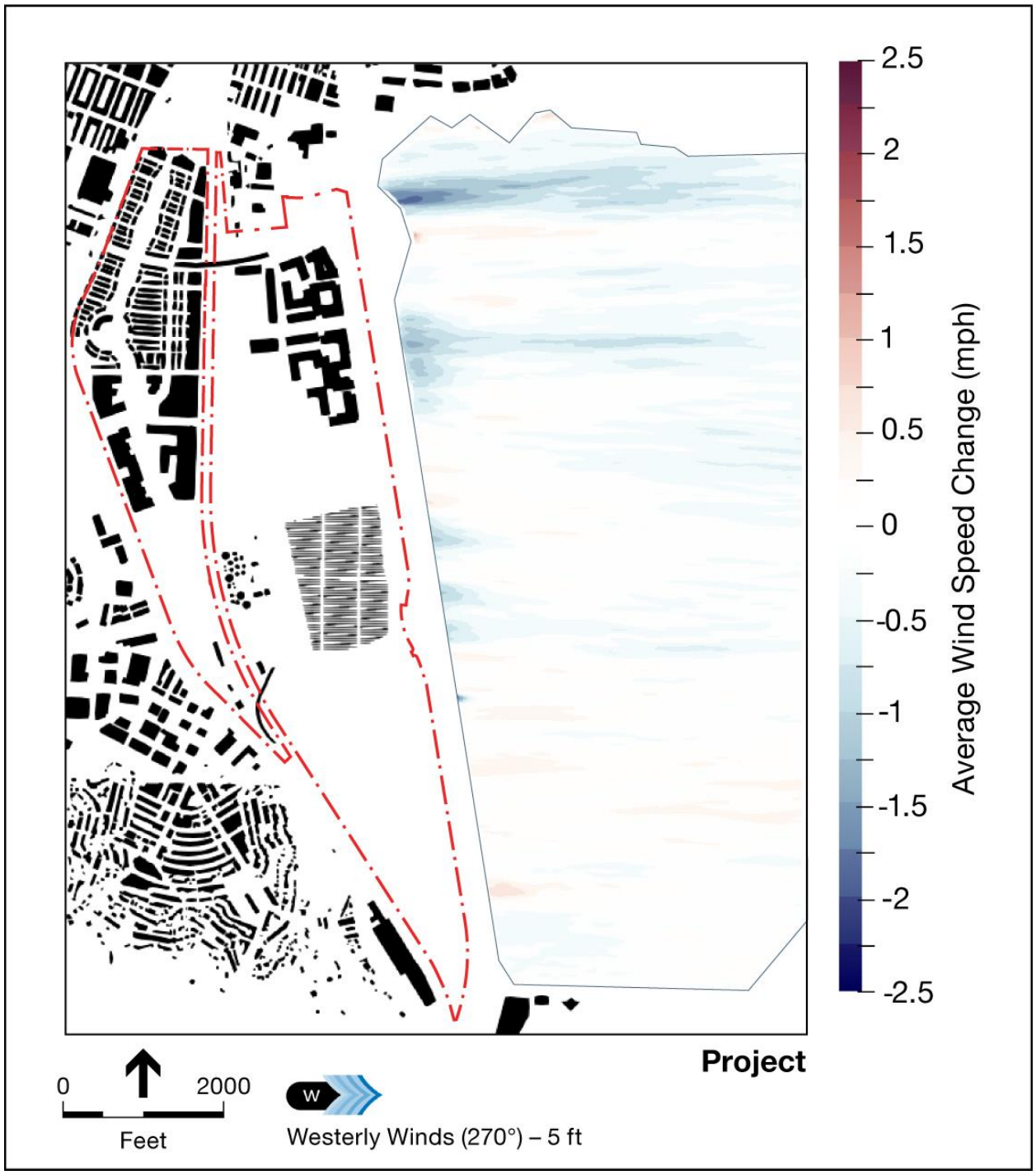
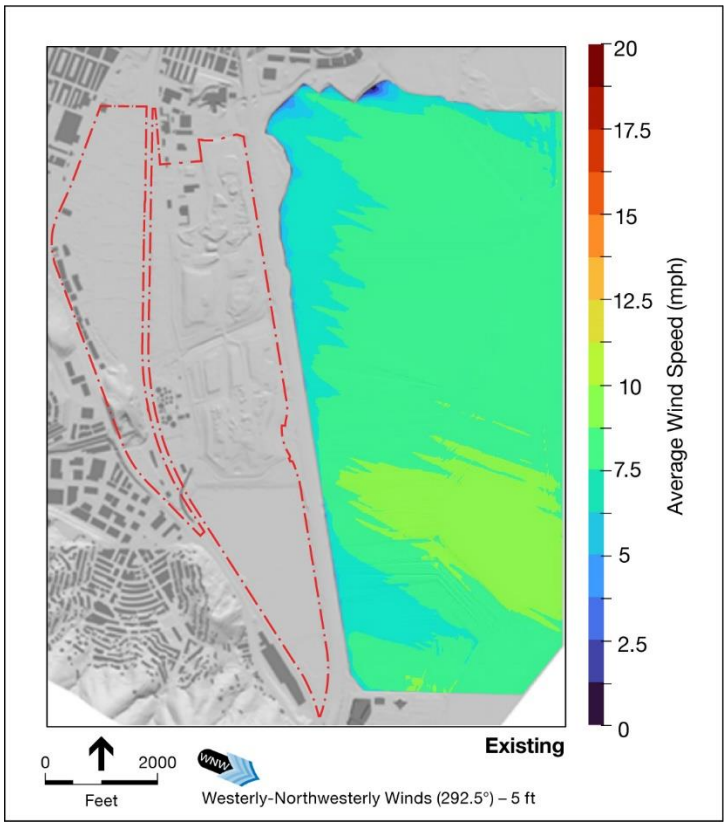


Figure 4.18-4a: Existing and With-Project Wind Speed, Westerly-Northwesterly Winds



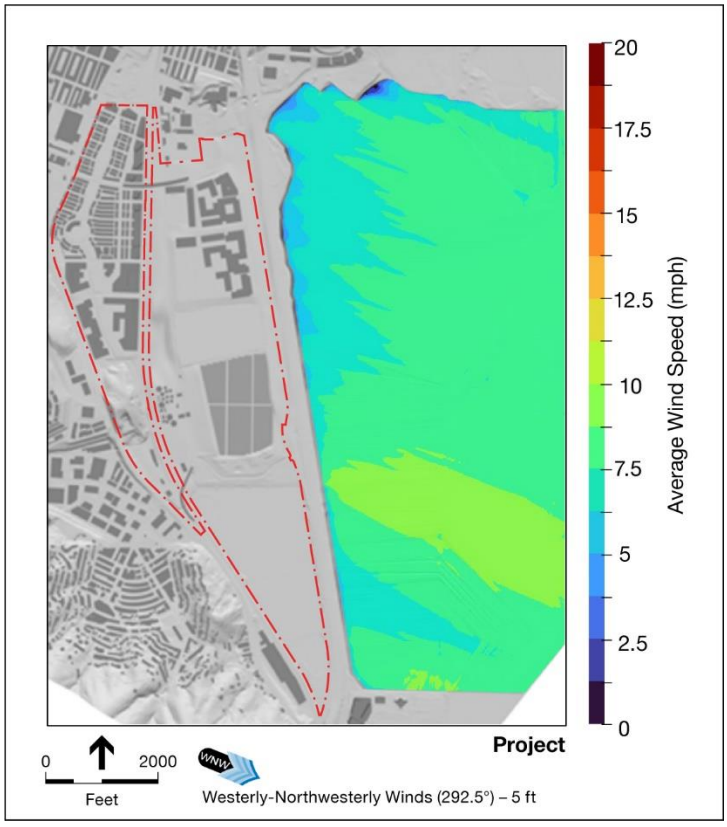


Figure 4.18-4b: Changes in Wind Speed With Project, Westerly-Northwesterly Winds

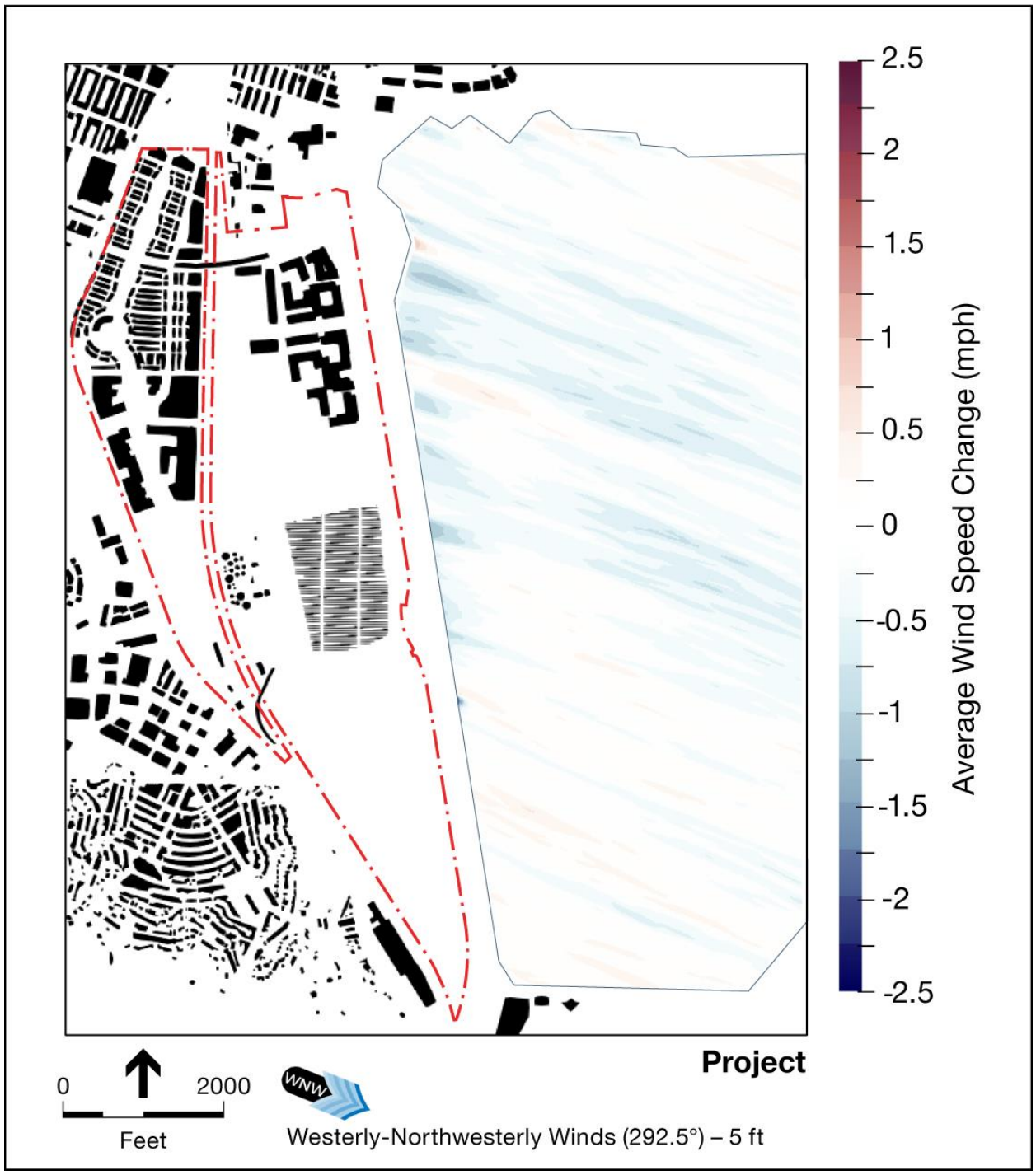
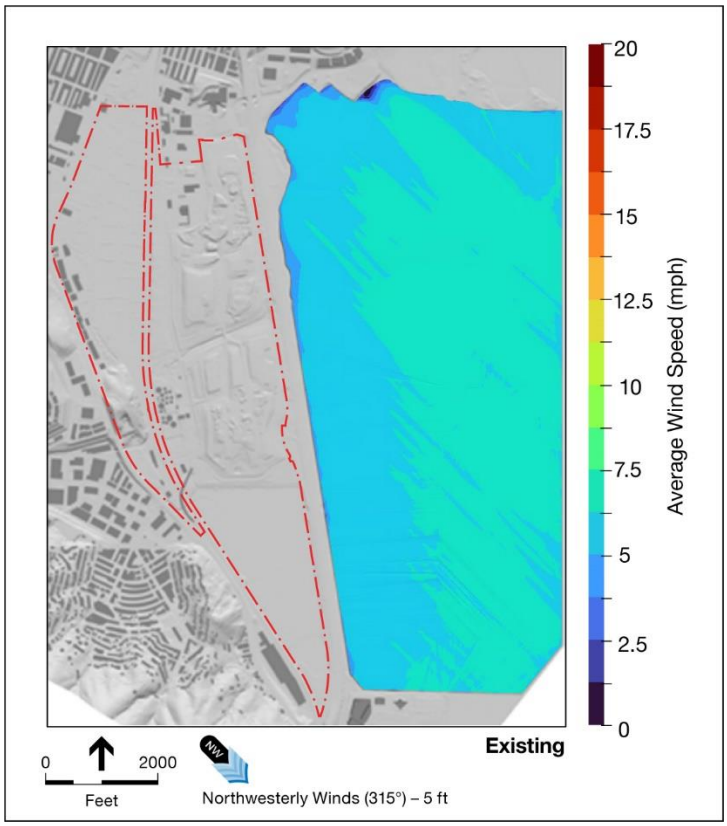


Figure 4.18-5a: Existing and With-Project Wind Speed, Northwesterly Winds



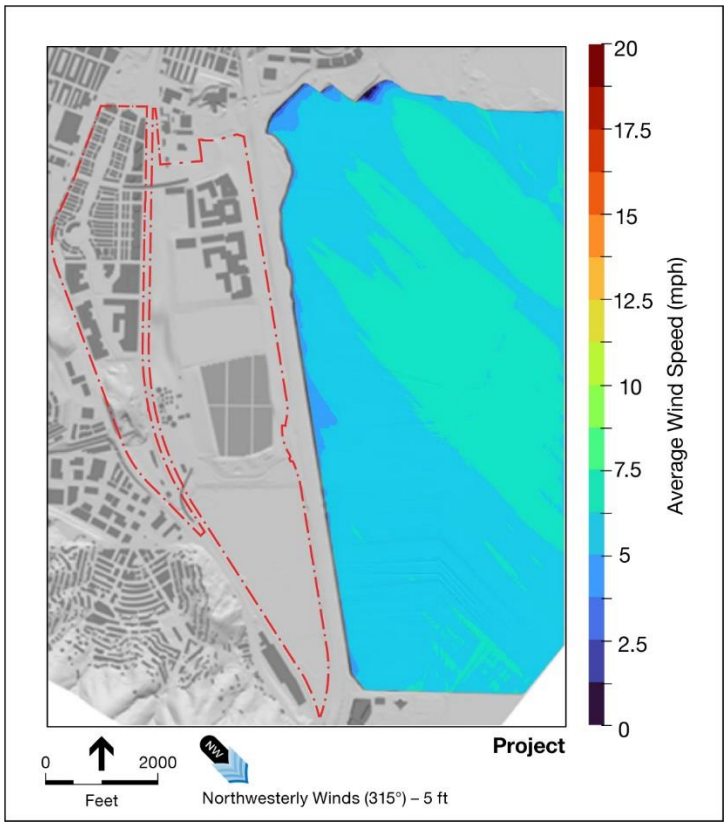


Figure 4.18-5b: Changes in Wind Speed With Project, Northwesterly Winds

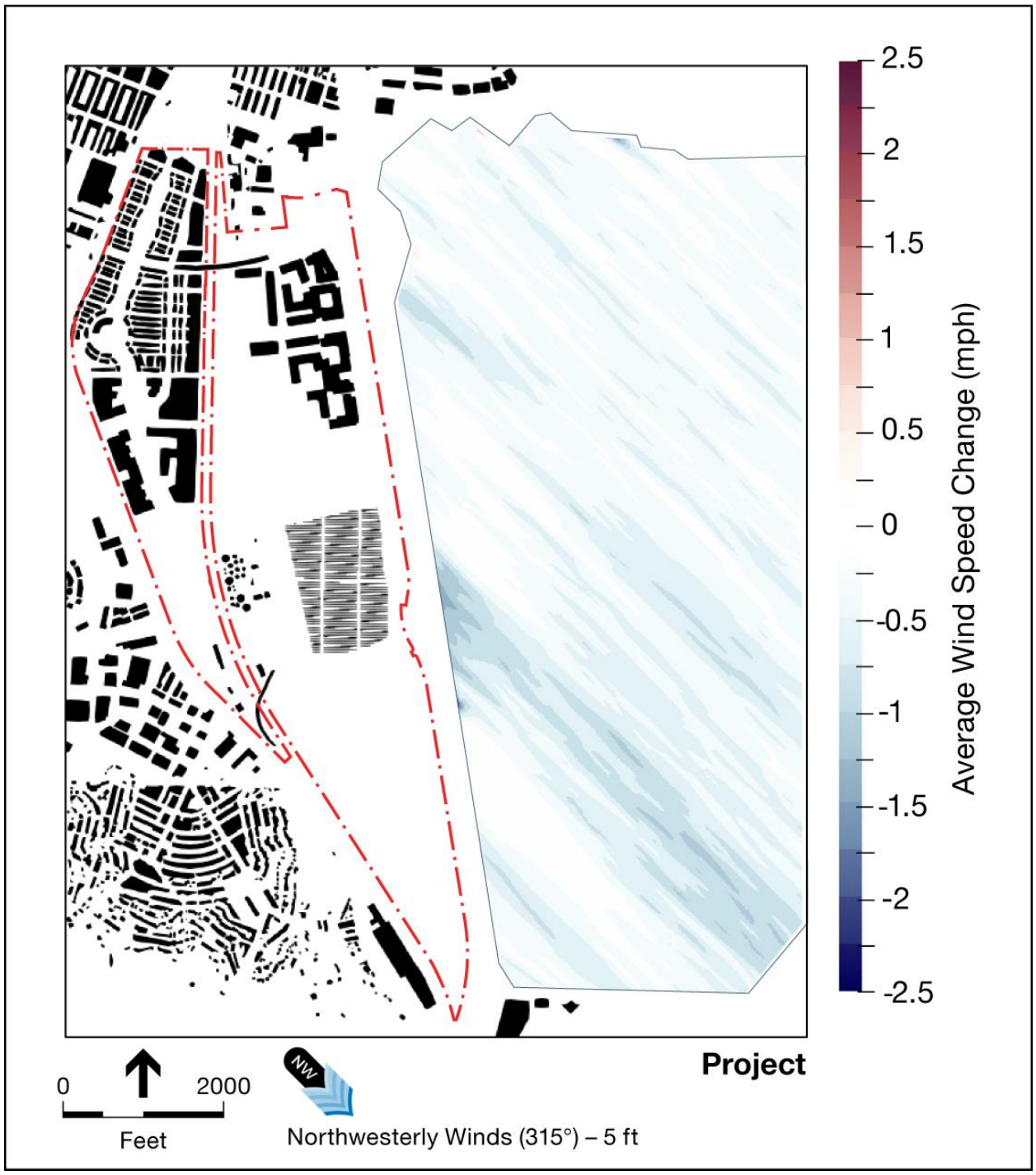
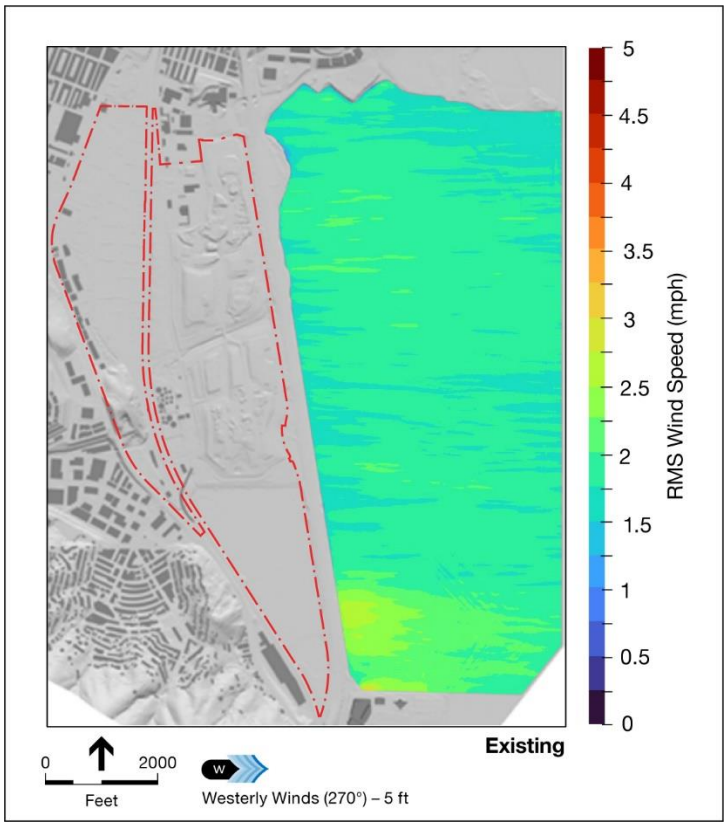


Figure 4.18-6a: Existing and With-Project Wind Fluctuations, Westerly Winds



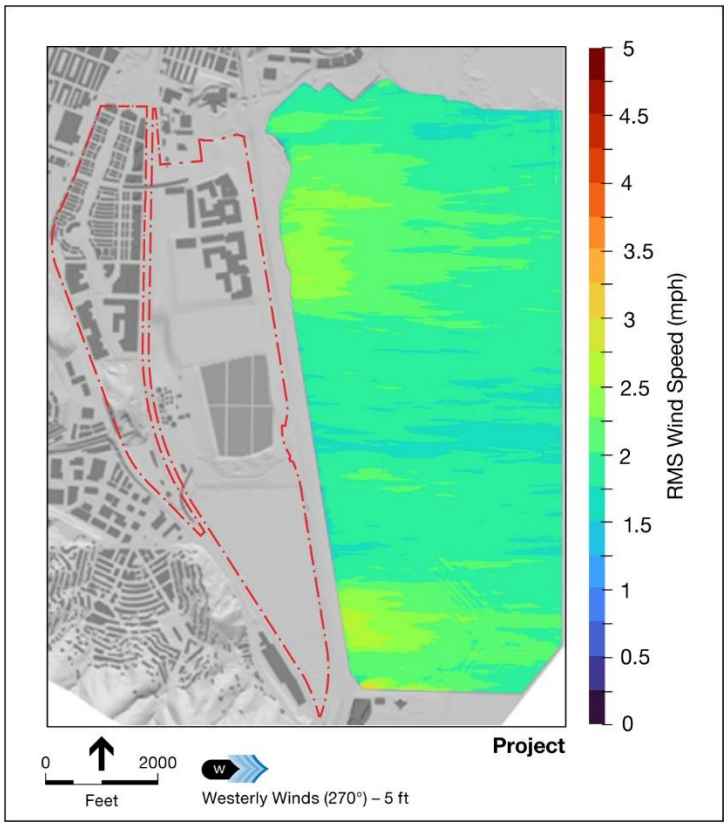


Figure 4.18-6b: Changes in Average Wind Fluctuation With Project, Westerly Winds

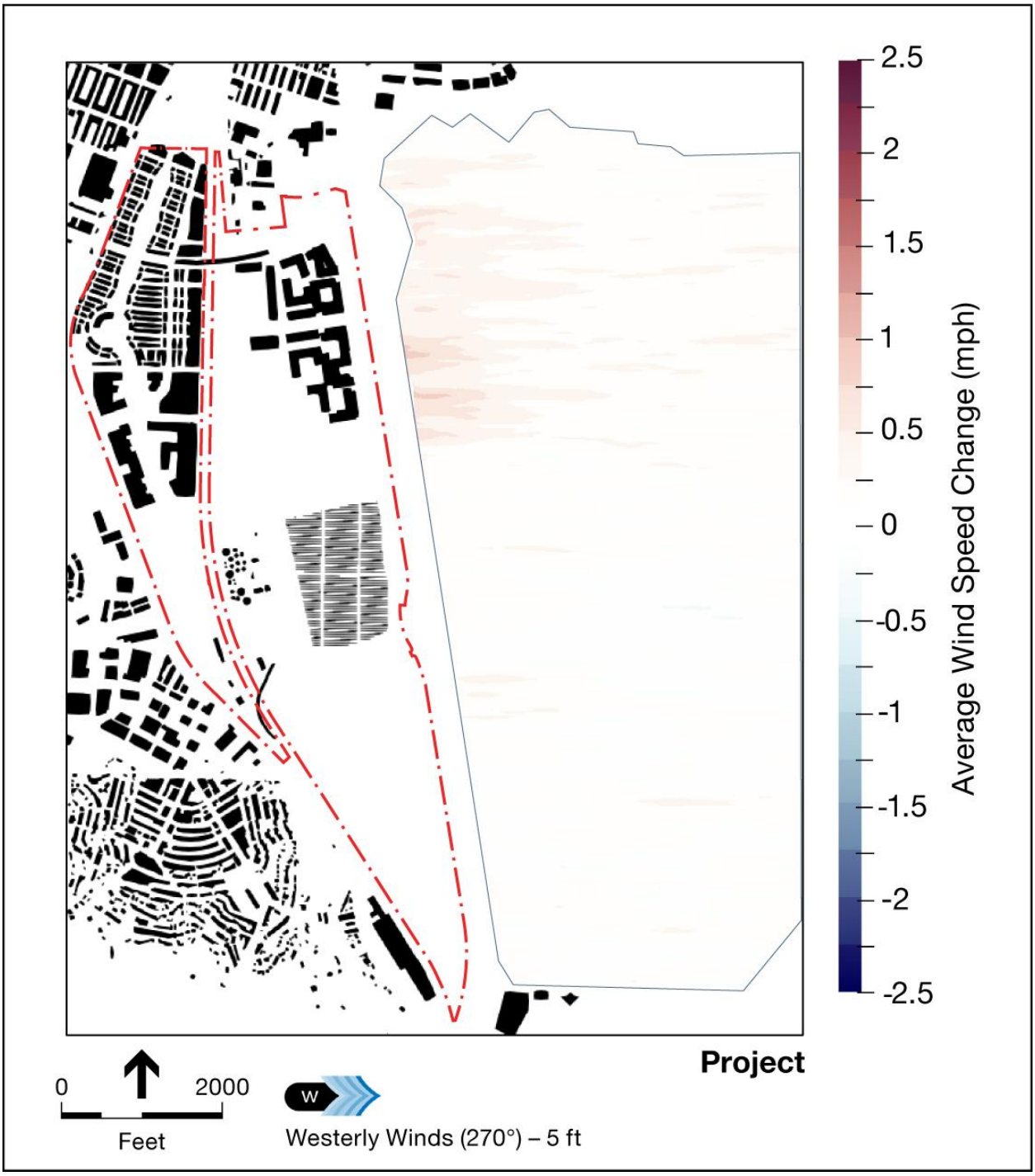
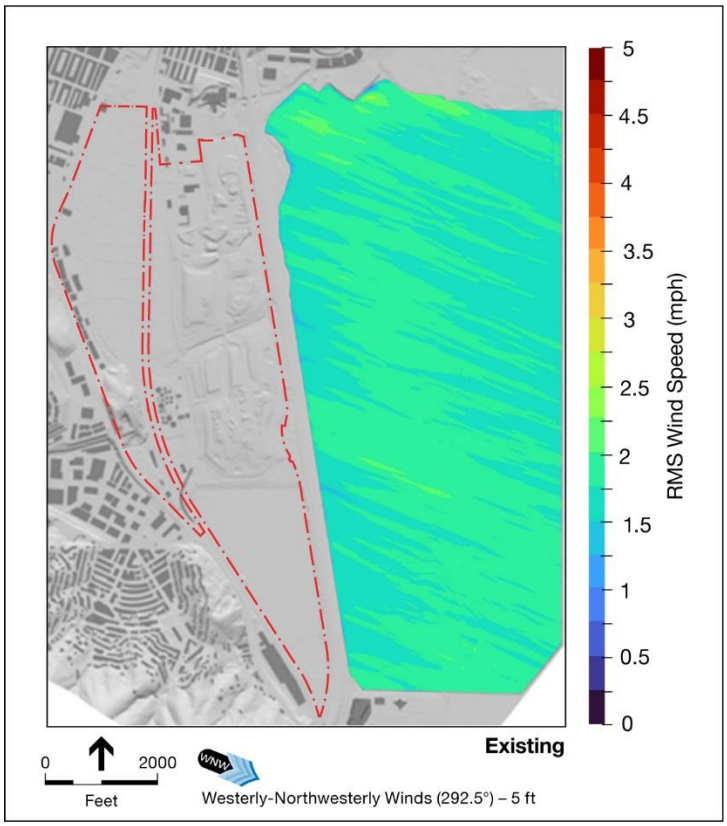


Figure 4.18-7a: Existing and With-Project Wind Fluctuations, Westerly-Northwesterly Winds



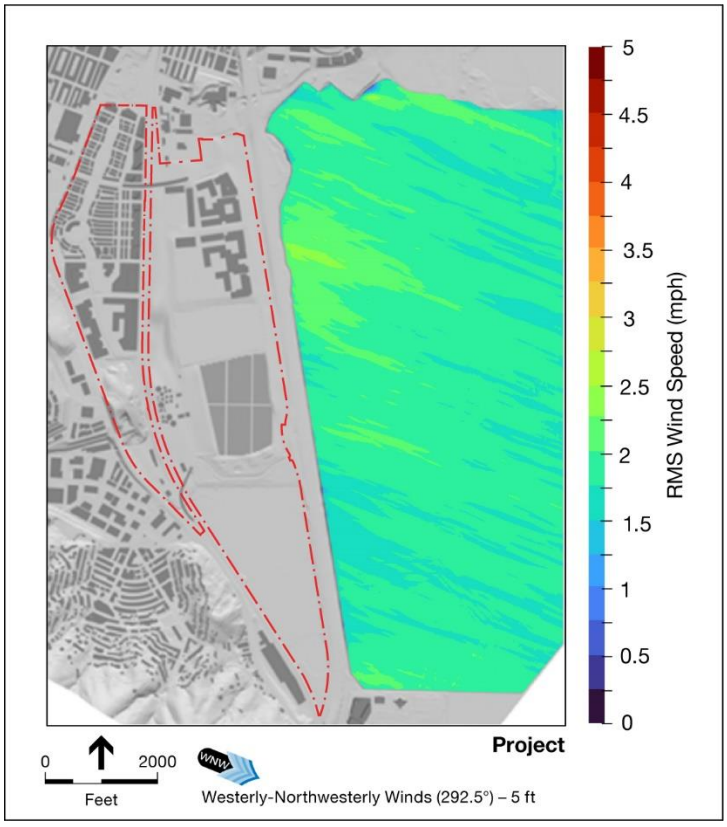


Figure 4.18-7b: Changes in Average Wind Fluctuation With Project, Westerly-Northwesterly Winds

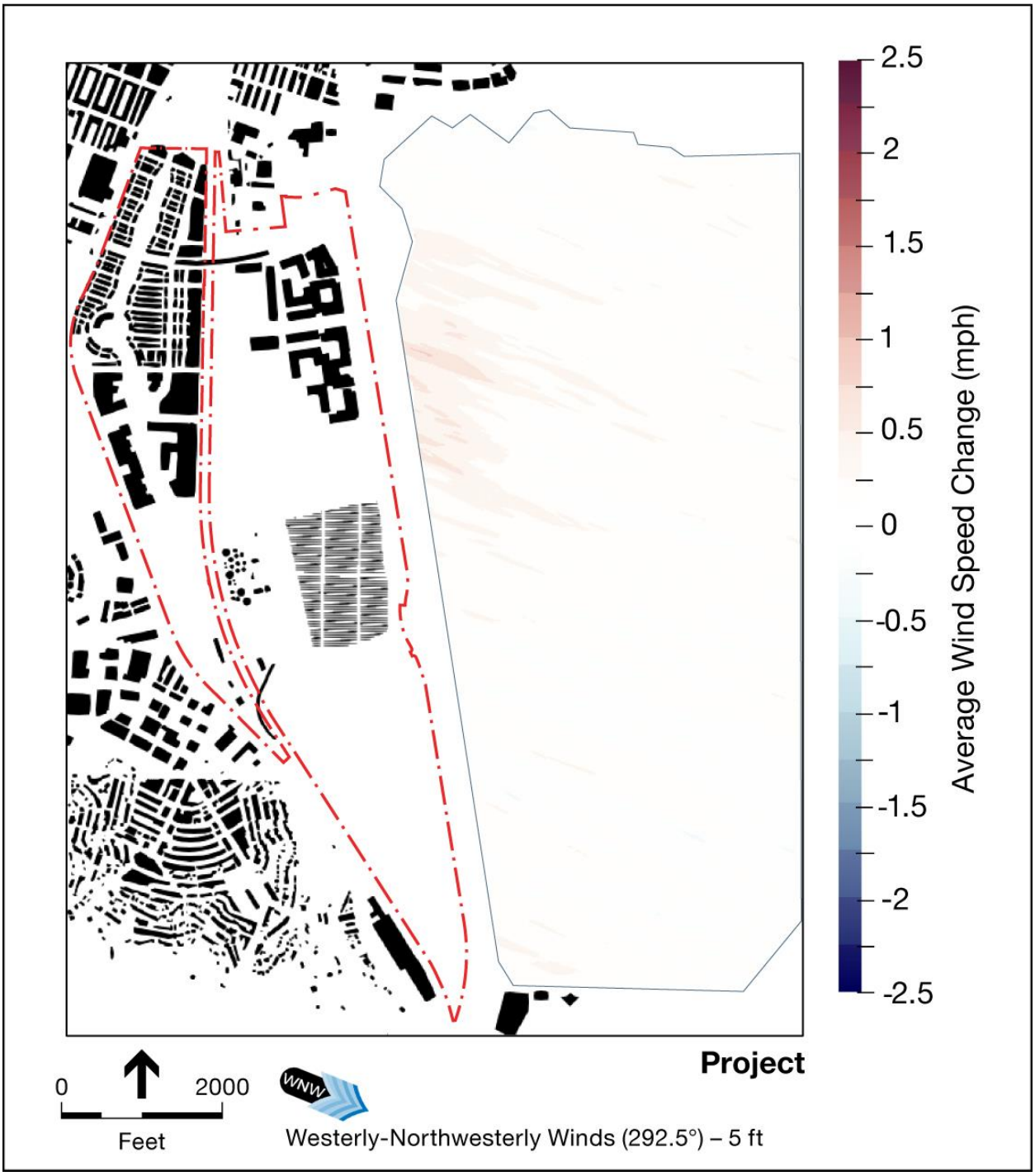
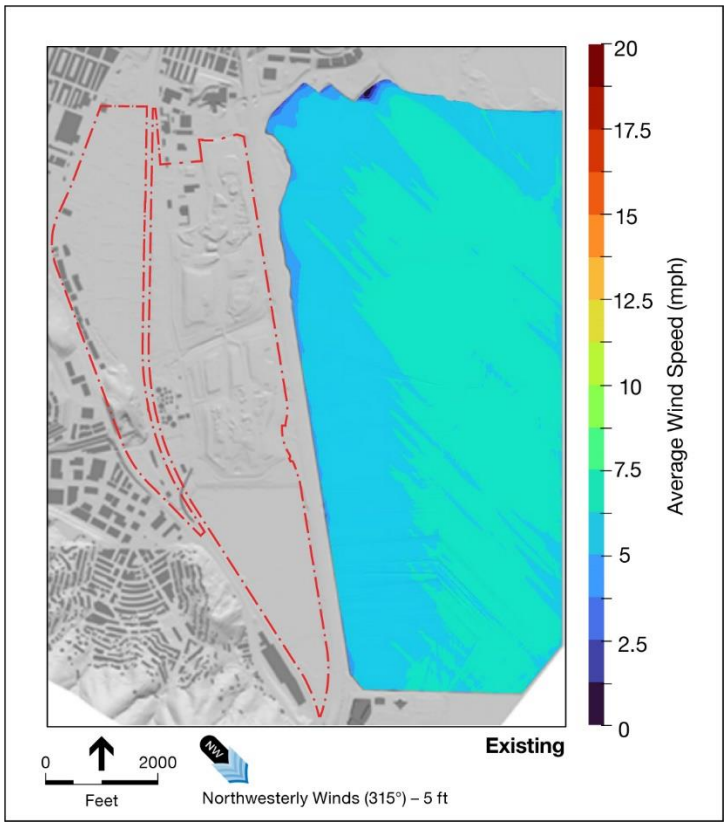


Figure 4.18-8a: Existing and With-Project Wind Fluctuations, Northwesterly Winds



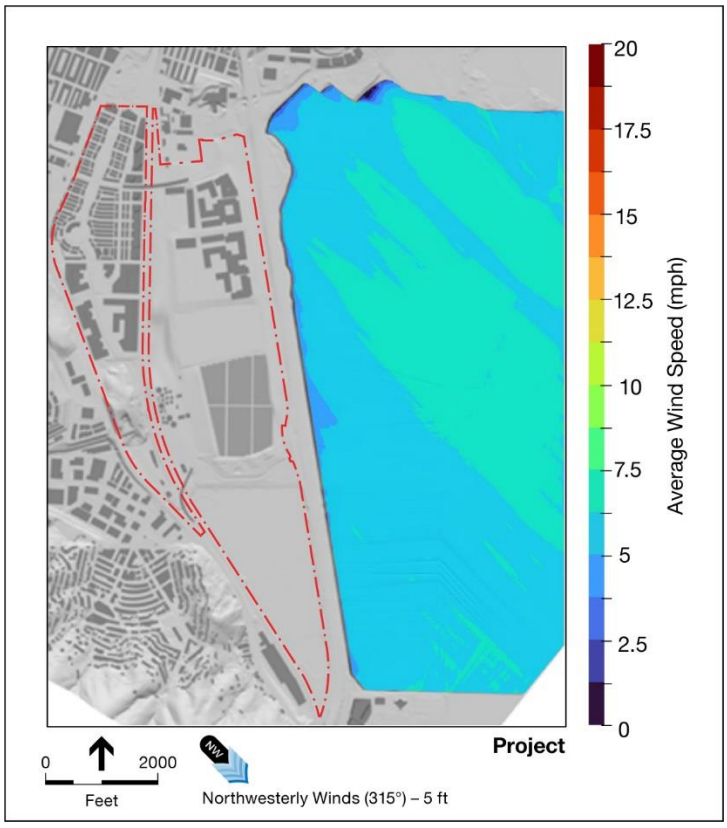
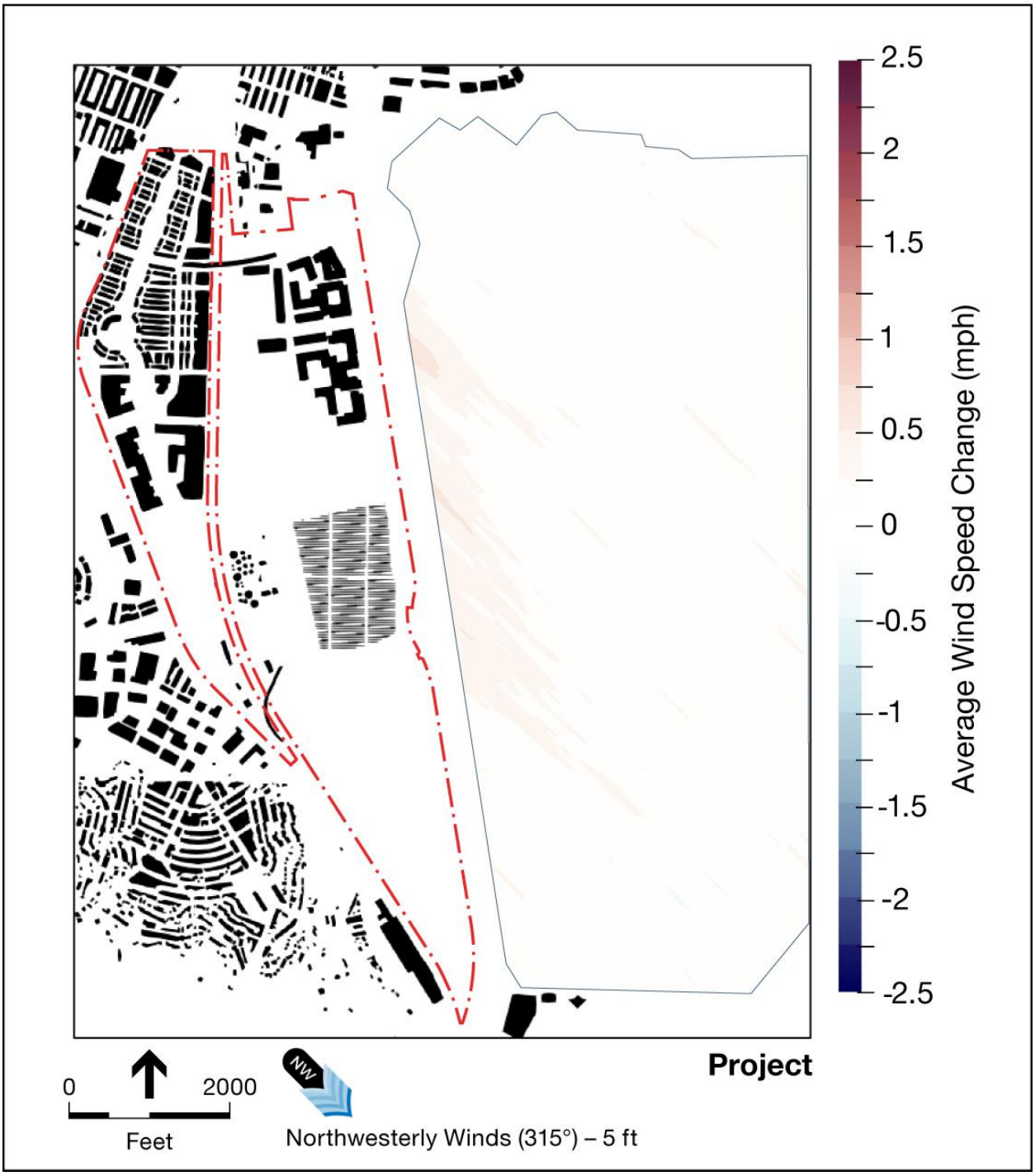


Figure 4.18-8b: Changes in Average Wind Fluctuation With Project, Northwesterly Winds



Effects on Existing Candlestick Point Launch Sites

Figure 4.18-9 illustrates the location of proposed Baylands development in relation to the north shore of the primary sailing area (Area of Interest). Baylands development would occur more than ¾ miles west of the launch point and would not cause any changes in vehicular access to parking areas serving the launch area. With westerly winds, Baylands would cause less than a ½ mph reduction in wind speed with no change in average wind fluctuation adjacent to the launch site.[372]

Figure 4.18-9: Baylands Development in Relation to the Candlestick Point State Recreation Area Primary Windsurfing Area (Area of Interest)

Significance Conclusion for Impact REC-2

As shown in **Figure 4.18-3a** through **Figure 4.18-8b**, although Baylands development would cause some decrease in average wind speeds and increase in turbulence, wind conditions within the majority of the Candlestick Point windsurfing area, including the launch area, would not be affected by the Specific Plan. Areas that would be affected are generally limited to 300-yard area along the shoreline, encompassing about 20 percent of the primary windsurfing area (Area of Interest) within which the average change in wind speed would generally be 1 to 2

[372] Because the Specific Plan area is located generally southwest of the Candlestick Point launch area, westerly winds would be indicative of the Specific Plan development's greatest effects at that location.

mph, with changes in turbulence generally limited to 1 to 1.5 mph. Thus, Baylands development would not substantially degrade the primary windsurfing area offshore from the Baylands within the Candlestick Point State Recreation Area. The impact is less than significant.

4.18.7 REFERENCES – RECREATION

California Department of Finance. 2023. Demographic Research Unit Report E-1 Population Estimates for Cities, Counties, and the State January 1, 2022 and 2023. Accessed July 12, 2023. https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fdof.ca.gov%2Fwp-content%2Fuploads%2Fsites%2F352%2FForecasting%2FDemographics%2FDocuments%2FRankCities_2023.xlsx&wdOrigin=BROWSELINK.

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4.19 WILDLAND FIRE

4.19.1 INTRODUCTION

a. Overview

This section addresses the physical environmental effects of Baylands development in relation to wildfire hazards, including the potential to exacerbate wildland fire risks as well as secondary effects such as exposure of people to pollutant concentrations from a wildland fire, and the potential for downstream flooding or landslides following a wildland fire.

b. Definitions

Fire hazard is the potential fire behavior or fire intensity in an area, based on the type(s) of fuel present (including both the natural and built environment) and their combustibility.

Fire hazard severity zones are defined based on vegetation, topography, and weather (i.e., temperature, humidity, and wind) and represent the likelihood of an area burning over a 30- to 50-year period without considering modifications such as fuel reduction efforts. CAL FIRE, which maintains fire hazard severity data for the entire state, designates three classes of fire hazard severity ratings: Moderate, High, and Very High.

"**Risk**" considers the intensity and likelihood of a fire event to occur as well as the chance, whether high or low, that a hazard such as wildfire will cause harm. Fire risk can be determined by identifying the susceptibility of a value or asset to the potential direct or indirect impacts of wildfire hazard events.

Local Responsibility Areas include incorporated cities, cultivated agricultural lands, and portions of the desert. Within these areas, fire protection is typically provided by city fire departments, fire protection districts, counties, and by CAL FIRE under contract to local governments. The Baylands is within a Local Responsibility Area.

State Responsibility Areas include those areas where the state has fiscal responsibility for wildland fire protection and exclude incorporated cities and lands under federal ownership.

Wildland Fire refers to an unplanned and uncontrolled fire in a natural area with combustible vegetation. A wildfire differs from other fires in that it is typically extensive in size and takes place outdoors in areas of grasslands, woodlands, bushlands, scrublands, peatlands, and other wooded areas that act as a source of fuel or combustible material.

Wildland-Urban Interface is broadly defined as any developed area where conditions affecting the combustibility of natural and cultivated vegetation (wildland fuels) and structures or

infrastructure (built fuels) allow for the ignition and spread of fire through these combined fuels. Such interface areas may have a "hard edge" between developed and undeveloped areas or may have an "intermix" area in which structures or semi-developed areas are mixed with wildland areas and vegetation.

4.19.2 ENVIRONMENTAL SETTING

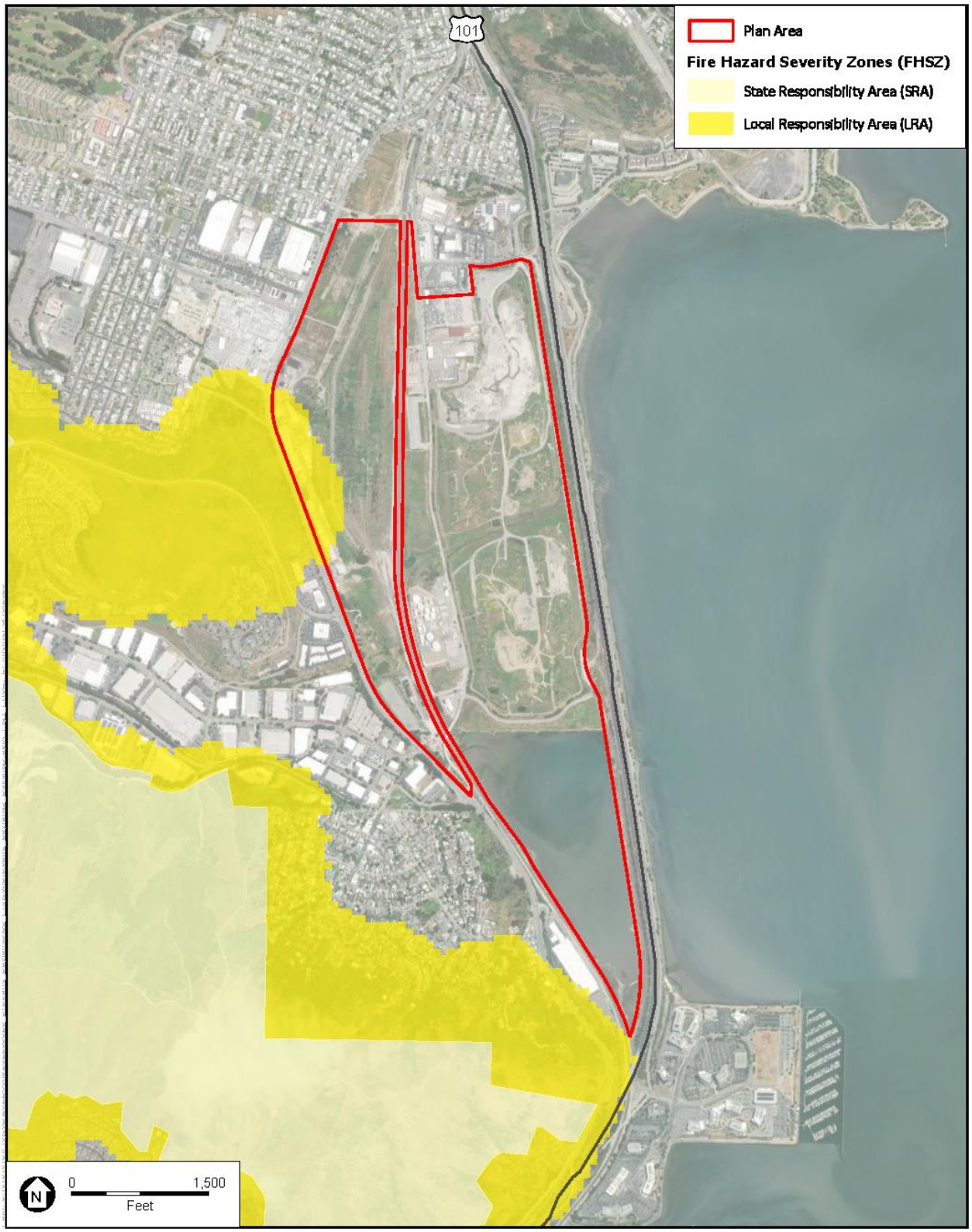
The Baylands Specific Plan area is located in an urban setting, with annual grasslands and coastal scrub habitats on Icehouse Hill constituting the largest area containing combustible vegetation. Other areas of combustible vegetation exist along Visitacion Creek and existing roadways, as well as smaller patches of vegetation throughout the site.

The Baylands site is within a "local responsibility area," which includes incorporated cities, urban regions, agriculture lands, and potions of the desert where the local government rather than the state is responsible for wildfire protection. Fire protection services within the City of Brisbane are provided by the North County Fire Authority, which delivers emergency and non-emergency fire response services. Brisbane is currently served from Fire Station No. 81, located at 3445 Bayshore Boulevard, within the southwestern portion of the Baylands.

The Baylands site is not within or adjacent to a High or Very High Fire Hazard Severity Zone (CAL FIRE 2025b). The closest Very High Fire Hazard Severity Zone to the Baylands is located adjacent to the San Andreas Reservoir and State Route 35, east of the City of Pacifica, approximately 5.75 miles to the southwest. The portion of the Specific Plan area that is designated as a Moderate Fire Hazard Area is located along the existing Industrial Way and consists of small-scale industrial and commercial uses (see **Figure 4.19-1**).[373] California Building Code Chapter 7A, which aims to reduce the risk of embers fanned by wind-blown wildfires from igniting buildings, as well as codes for roofing, siding, decking, windows, and vents currently applies only to the design and construction of new buildings located in High and Very High fire hazard zones within Local Responsibility Areas and throughout all State Responsibility Area regardless of the fire hazard severity ranking.

[373] The fire hazard severity model used by CAL FIRE to classify wildland fire hazards has two key elements: probability of an area burning and expected fire behavior under extreme fuel and weather conditions. Moderate, High, and Very High fire severity zones reflect areas that have similar burn probabilities and fire behavior characteristics. The factors considered in determining fire hazard within wildland areas are fire history, flame length, terrain, local weather, and potential fuel over a 50-year period. Within areas outside of wildlands such as the Baylands, the model considers factors that might lead to buildings being threatened, including terrain, weather, urban vegetation cover, blowing embers, proximity to wildland, fire history, and fire hazard in nearby wildlands. Designation of a portion of the Baylands that is an urban area without combustible vegetation as within a moderate fire hazard area recognizes that embers can spread wildfire because they can travel long distances in the wind and ignite roofs and attics (by getting in through vents). Fire hazard severity zones are not a structure loss model, as key information regarding structure ignition (such as roof type, etc.) is not included (CAL FIRE 2025a).

Figure 4.19-1: Fire Hazard Severity Zones



Source: ESRI, 2022; CAL FIRE, 2025a; ESA, 2025.

As shown in **Figure 4.19-2**, the Baylands is not within a wildland-urban interface, where conditions affecting the combustibility of natural and cultivated vegetation (wildland fuels) and structures or infrastructure (built fuels) would allow for the ignition and spread of fire through these combined fuels. Wildland-urban interface areas are designated along the west side of Bayshore Boulevard within Brisbane and Daly City and to the north in San Francisco (US Forest Service 2020).

4.19.3 REGULATORY CONTEXT FOR BAYLANDS DEVELOPMENT

a. Federal Laws, Plans, Programs, and Regulations

National Incident Management System

The National Incident Management System is a standardized approach to incident management and response, developed by the Department of Homeland Security. The system guides all levels of government, nongovernmental organizations, and the private sector to work together to prevent, protect against, mitigate, respond, and recover from incidents. The system defines operational systems that guide how personnel work together during incidents (FEMA 2022).

Disaster Mitigation Act of 2000

The Code of Federal Regulations Title 44, CFR, Chapter 1, Part 201 provides requirements and procedures for state, local, tribal, and territorial governments to engage in hazard mitigation planning to receive certain types of non-emergency disaster assistance.

National Fire Plan

Managing the Impacts of Wildfire on Communities and the Environment: A Report to the President in Response to the Wildfires of 2000 (National Fire Plan) was prepared by the Department of Agriculture and the Department of the Interior to develop a response to severe wildland fires, reduce fire impacts on rural communities, and assure sufficient firefighting capacity in the future. The National Fire Plan is organized into the following major topic areas: firefighting preparedness and capacity, rehabilitation, and restoration, to restore landscapes and protect communities from post-fire damage, hazardous fuel reduction, forest health management, rural and community assistance, accountability, and research and development.

Figure 4.19-2: Wildland-Urban Interface

Source: Microsoft, 2021; SILVIS Lab, 2019; ESA, 2025.

b. State Laws, Plans, Programs, and Regulations

California Fire Code

The California Fire Code is contained within California Code of Regulations Title 24, Chapter 9 and is also referred to as the California Building Standards Code. The California Fire Code establishes minimum requirements consistent with nationally recognized good practices to safeguard the public health, safety, and general welfare from the hazards of fire, explosions, or dangerous conditions in new and existing buildings, structures, and premises and provides safety and assistance to firefighters and emergency responders during emergency operations. This code establishes regulations affecting or relating to buildings, structures, processes, premises, and a reasonable degree of life and property safeguards regarding fire hazards, fire suppression, or alarm systems, and conditions affecting the safety of emergency responders.

Chapter 7A of the Fire Code establishes minimum standards for protection of life and property by increasing the ability of buildings in a State Responsibility Area fire hazard zone or any Wildland-Urban Interface area to resist the intrusion of flames or embers penetrating buildings. Minimum standards are required for all components of a building, including ignition-resistant walls, floors, roofing, and other exterior coverings, vents, doors, windows, skylights, and decking.

Title 8, California Code of Regulations

California Code of Regulations Section 6773, Fire Protection and Fire Equipment, establishes minimum fire suppression and emergency medical services. The standards include guidelines on the handling of highly combustible materials, firehose sizing requirements, restrictions on the use of compressed air, access routes, and testing, maintenance, and use of all firefighting and emergency medical equipment.

California Health and Safety Code

California Health and Safety Code Section 13000 et seq. provides fire regulations concerning building standards, fire protection and notification systems, fire protection devices, and fire suppression training.

Strategic Fire Plan for California

The 2018 Strategic Fire Plan for California (California Fire Plan) is the state's roadmap for reducing the risk of wildfire. The California Fire Plan focuses on fire prevention and suppression activities to protect lives, property, ecosystem services, and natural resource management. The California Fire Plan's vision is for a natural environment that is more fire resilient; buildings and infrastructure that are more fire resistant; and a society that is more

aware of and responsive to the benefits and threats of wildland fire; all achieved through local, state, federal, tribal, and private partnerships.

California State Hazard Mitigation Plan

The 2023 California Hazard Mitigation Plan (State Hazard Mitigation Plan) represents the state's primary hazard mitigation guidance document. The State Hazard Mitigation Plan details California's historical and current hazards, identifies mitigation strategies and actions to address those hazards, and provides guidance to local jurisdictions developing their own hazard mitigation plans.

California Emergency Response Plan

Pursuant to the Emergency Services Act (Government Code Section 8550 et seq.), California has developed an Emergency Response Plan to coordinate emergency services that are provided by federal, state, and local government agencies and private persons. The Emergency Response Plan is administered by the State's Office of Emergency Services (OES). The OES coordinates the response of state agencies, such as Cal EPA, California Highway Patrol, California Department of Fish and Wildlife, Regional Water Quality Control Boards, regional air districts, and local agencies. The Emergency Response Plan defines the policies, concepts, and general protocols for proper implementation of the California Standardized Emergency Management System. The California Standardized Emergency Management System provides an emergency management protocol that agencies in California are required to follow during multi-agency response efforts, whenever state agencies are involved.

California Fire Service and Rescue Emergency Mutual Aid Plan

The purpose of the California Fire Service and Rescue Emergency Mutual Aid Plan is to provide for systematic mobilization, organization, and operation of necessary fire and rescue resources of the state and its political subdivisions in mitigating the effects of disasters, whether natural or human-caused. The plan provides plans for the expedient mobilization and response of available fire and rescue resources on a local, area, regional, and statewide basis. The plan also provides instructions for communication facilities for the exchange and dissemination of fire and rescue-related data, directives, and information between fire and rescue officials of local, state, and federal agencies.

Attorney General's Best Practices for Analyzing and Mitigating Wildfire Impacts of Development Projects under the California Environmental Quality Act

The Office of the Attorney General released the guidance document *Best Practices for Analyzing and Mitigating Wildfire Impacts of Development Projects Under the California Environmental Quality Act* in October 2022. While it does not have the force of law or a mandatory regulation, this

document provides guidance to assist lead agencies in complying with CEQA as they consider the effects of wildfire on development projects.

Among other things, this document suggests that lead agencies consider the contexts within which wildfire risk can be reduced through planning and design. These include such factors as project density (higher density developments tend to be less vulnerable to wildfire and present lessened risk associated with wildfire ignitions); project location within the landscape (project placement in the landscape relative to fire history, topography, and wind patterns influences wildfire risk); and the availability of adequate water supplies and infrastructure.

California Public Utilities Commission

General Order 165

General Order 165 establishes requirements for the inspection of electric distribution and transmission facilities that are not contained within a substation. Utilities must perform "Patrol" inspections, defined as a simple visual inspection of utility equipment and structures that is designed to identify obvious structural problems and hazards, at least once per year for each piece of equipment and structure. "Detailed" inspections, where individual pieces of equipment and structures are carefully examined, are required every five years for all overhead conductor and cables, transformers, switching/protective devices, and regulators/capacitors. By July 1st of each year, each utility subject to this General Order must submit an annual report of its inspections for the previous year under penalty of perjury.

General Order 166

General Order 166 Standard 1.E requires that investor-owned utilities develop a Fire Prevention Plan, which describes measures that the electric utility will implement to mitigate the threat of power-line fires generally. Additionally, this standard requires that investor-owned utilities outline a plan to mitigate power-line fires when wind conditions exceed the structural design standards of the line during a Red Flag Warning in a high fire threat area. Fire Prevention Plans created by investor-owned utilities are required to identify specific parts of the utility's service territory where the conditions described above may occur simultaneously. Standard 11 requires that utilities report annually to the CPUC regarding compliance with General Order 166. In compliance with Standard 1.E of this General Order, PG&E adopted a Fire Prevention Plan in October 2017 that was updated in October 2018.

Cal/OSHA

The Occupational Safety and Health Act of 1970 (Title 8 CCR) requires development and enforcement of workplace safety regulations concerning the use of hazardous materials in the workplace, including requirements for employee safety training, availability of safety equipment, accident and illness prevention programs, hazardous substance exposure warnings,

and emergency action and fire prevention plan preparation. For example, under Title 8 CCR 5194 (Hazard Communication Standard), construction workers must be informed about hazardous substances that may be encountered. Compliance with Injury Illness Prevention Program (IIPP) requirements (Title 8 CCR 3203) would ensure that workers are properly trained to recognize workplace hazards and to take appropriate steps to reduce potential risks due to such hazards.

c. Regional Plans, Policies, and Regulations

CAL FIRE 2022 Strategic Fire Plan

The CAL FIRE 2022 Strategic Fire Plan for the San Mateo to Santa Cruz Unit (2022 Strategic Fire Plan) serves as a planning and assessment tool that identifies and prioritizes pre-fire and post-fire management strategies and tactics to reduce loss. The 2022 Strategic Fire Plan identifies values, goals and objectives, ignition analysis, priority landscapes, unit preparedness and firefighting capabilities, fire prevention, and vegetation management.

San Francisco Bay Area Regional Emergency Coordination Plan

The San Francisco Bay Area Regional Emergency Coordination Plan (Regional Emergency Coordination Plan) provides an all-hazards framework for collaboration among responsible entities and coordination during emergencies in the San Francisco Bay Area. The Regional Emergency Coordination Plan defines procedures for regional coordination, collaboration, decision-making, and resource-sharing among emergency response agencies in the Bay Area.

San Mateo County Greater Alarm and Mutual Aid Plans

The San Mateo County Greater Alarm and Mutual Aid Plans is a collaborative effort of the San Mateo County Fire Chiefs Association to provide an efficient and effective response to all risk incidents that occur in San Mateo County. The plans include wildland alarm plans, wildland procedures, dispatch levels, wildland resources, and contact information for the responsible fire response entities in the County. San Mateo fire agencies have accepted the terms of the mutual aid plans and agree to follow the plans and procedures for providing mutual aid.

d. City of Brisbane Plans, Ordinances, and Regulations

General Plan

The following General Plan policies are applicable to wildfire:

Circulation Element

Policy C.46: Consider potential effects on mobility and emergency evacuation in making land use decisions.

Community Health and Safety Element

Policy 163: Continue to ensure a 3-minute emergency

Municipal Code

Fire Prevention Code

Municipal Code Chapter 15.44, Fire Prevention Code (Fire Code), combines the 2021 Edition of the International Fire Code and the 2022 Edition of the California Fire Code, including Appendices B, C, D, F, and L, with some modifications. Municipal Code Chapter 15.44 thus establishes fire safety requirements for new and existing buildings, facilities, storage, and processes, and addresses fire prevention, fire protection, life safety, safe storage, and use of hazardous materials. The City's modifications in the Fire Code establish additional building permit requirements regarding dead-end fire apparatus roads and fire turnarounds, fire lanes, fire hydrants, roof coverings, storage of explosive and blasting agents, fire sprinkler systems, and design requirements for exterior doors, as well as setbacks and vertical clearance on fire access routes.

Weed and Flammable Waste Abatement Ordinance

Municipal Code Chapter 8.50, Weed and Flammable Waste Abatement, requires private landowners to monitor and control weeds and flammable waste materials to which the owner or occupant has right of access. The purpose of this chapter is to reduce the threat of fire created by weeds and flammable wastes on private property, which the fire chief determines to constitute a fire hazard and a public nuisance. Implementation and enforcement of Chapter 8.50 is delegated to the North County Fire Authority.

City of Brisbane Emergency Operations Plan

Brisbane's Emergency Operations Plan outlines how the City will coordinate responses to major emergencies and disasters, including operational strategies and plans for managing inherently complex and potentially catastrophic events. The Plan addresses four phases of emergency management: (1) preparedness, (2) response, (3) recovery, and (4) mitigation. The Emergency Operations Plan organizes various departments and agencies into 21 emergency functions to facilitate planning and coordination. The Emergency Operations Plan addresses multiple potential hazards and threats (e.g., earthquakes, storms, flooding, and wildfires).

2021 Multijurisdictional Local Hazard Mitigation Plan

The 2021 Multijurisdictional Local Hazard Mitigation Plan defines measures to reduce risks from natural disasters in San Mateo County, including incorporated cities and unincorporated areas. The Local Hazard Mitigation Plan assesses hazard vulnerabilities, including wildfires, and identifies mitigation actions that jurisdictions will pursue in order to reduce the level of injury, property damage, and community disruption that might otherwise result from such events. The Local Hazard Mitigation Plan is included as an appendix to the City's General Plan.

4.19.4 SIGNIFICANCE CRITERIA

The following criterion was used to determine the significance of utilities, service systems, and water supply impacts.

Threshold WLF-1: The Baylands Specific Plan would cause a significant impact if construction or operational activities would exacerbate fire risk, thereby exposing people to pollutant concentrations from a wildfire or causing a substantial risk of loss, injury, or death due to downslope or downstream flooding or landslides as the result of runoff, post-fire instability, or drainage changes.

Analysis of the extent to which the Baylands Specific Plan would substantially impair an adopted emergency response plan or emergency evacuation plan is provided in Section 4.13, Impact HAZ-5, Emergency Preparedness.

4.19.5 PROJECT IMPACTS AND MITIGATION MEASURES

a. Threshold WLF-1: Exacerbate Fire Risk

Methodology for Determining Significance

In determining whether a significant impact would result from the 2025 Specific Plan project, the analysis considers the types of activities that would occur within areas of combustible vegetation during construction and operations. The analysis reasonably assumes compliance with federal, state, and local laws and requirements, recognizing that the Specific Plan and off-site infrastructure areas are within local responsibility areas and not designated as High or Very High Fire Hazard Zones. Thus, Specific Plan development would be subject to the provisions of Brisbane Municipal Code Chapter 8.60 (Weed and Flammable Waste Abatement) and Chapter 15.88 (Fire Prevention Code) but would not be subject to requirements for development within state responsibility or High or Very High Fire Hazard Zones.

Impact Assessment

Construction

Construction activities within areas containing combustible vegetation include clearing and grubbing prior to site grading and construction of trails, recreational improvements, and relocation of the Mission Blue Nursery on Icehouse Hill. These activities would occur within areas of light to medium fuels (mainly scrubs and grasses).

These activities would involve the use of typical construction equipment (i.e., scraper/blade, backhoes, and rollers) powered by gasoline or diesel fuel, as well as smaller, handheld equipment, such as weed trimmers. Use of construction equipment has the potential to cause sparks. The large rocks on Icehouse Hill would also have the potential for causing a fire if struck by a metal blade.

Sparks originating from construction activities have the potential to ignite vegetation or other materials within construction sites area, or to spread to the surrounding vegetated land. Site grading, including clearing and grubbing activities, have the highest potential to generate sparks that may ignite a fire.

Operations

Post-construction activities would be concentrated within residential, commercial, institutional, and infrastructure use that would be separated from wildland portions of the site. However, the use of trails and recreational improvements on Icehouse Hill and within restored habitat areas would generate the potential for ignition of dry vegetation.

Significance Conclusion for Impact WLF-1

Construction

Because sparks originating from construction activities have the potential to ignite vegetation or other materials within or adjacent to the construction sites, a significant impact would occur.

Operations

Baylands development would be required to comply with the California Building Code, California Fire Code, and Municipal Code fire prevention and weed and flammable waste abatement requirements, which will ensure that required safety measures are incorporated into all building designs. However, human use of trails constructed through or adjacent to habitat areas as well as recreational improvements on Icehouse Hill have the potential for ignition of dry vegetation.

Program EIR Mitigation Measures

The Program EIR did not propose any wildland fire mitigation measures.

Additional Mitigation Measures

MM WLF-1: Wildfire Risk Reduction. To prevent sparking a wildland fire, construction activities within or adjacent to non-irrigated vegetated areas shall be subject to the following requirements:

- Construction activities shall not occur during red flag warning days.
- Internal combustion engines used in construction shall be equipped with spark arrestors that are in good working order.
- Equipment staging and storage areas shall be cleared of extraneous flammable materials and provided with a non-flammable surface.
- Fires ignited on site shall be immediately reported to the North County Fire Authority.
- No driving (cars, trucks, all-terrain vehicles, or similar) shall be permitted over unmaintained dry vegetation.
- Equipment engines shall be kept free of oil and dust, and mowers shall be kept free of flammable materials.
- Weed trimmers shall be used to cut down any dry weeds and grass before commencing any construction activities.
- Because a rock hidden in vegetation can start a fire if struck by a metal blade, large rocks in the area of grading or blading shall be removed before clearing and grubbing.
- Smoking shall be restricted to designated smoking areas that are void of vegetation and have appropriate cigarette butt receptables.
- Construction crew vehicles within or adjacent to areas of non-irrigated vegetation shall be equipped with a water-type fire extinguisher and crew shall be trained in the use of the fire extinguisher in the event that equipment sparks a fire.

Significance Conclusion for Impact WLF-1 Following Implementation of All Mitigation Measures

Mitigation Measure MM WLF-1 identifies specific precautions to be taken prior to and during construction activities that occur within or adjacent to non-irrigated vegetated areas and ensures that crew have been trained in the use of the equipment to extinguish small fires.

By minimizing the risk of construction-related fire ignition, implementation of MM WLF-1 would also minimize the potential for a wildfire to spread and expose people to pollutant concentrations from a wildfire or cause a substantial risk of loss, injury, or death due to downslope or downstream flooding or landslides as the result of runoff, post-fire instability, or drainage changes.

This impact would be less than significant with mitigation incorporated.

4.19.6 REFERENCES – WILDLAND FIRE

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4.20 SIGNIFICANT UNAVOIDABLE ENVIRONMENTAL EFFECTS

CEQA Guidelines Section 15126.2(b) requires EIRs to describe "any significant impacts, including those which can be mitigated but not reduced to a level of insignificance." Once an impact is determined to be significant, it is the Lead Agency's responsibility to identify and implement all feasible[374] mitigation measures to avoid the significant impact or to reduce its severity to below the identified threshold of significance.

CEQA does not preclude a Lead Agency from approving a project with one or more significant unavoidable impacts. To approve a project with one or more significant unavoidable impacts, the Lead Agency must, on the basis of substantial evidence, (1) conclude that the unavoidable environmental damage from the project is acceptable when balanced against the project's benefits and (2) adopt a statement of overriding considerations detailing why the agency believes that specific economic, legal, social, technological, or other stated benefits, including regionwide or state-wide environmental benefits, are sufficient to warrant project approval (CEQA Guidelines Section 15093). The statement of overriding considerations is required to explain in writing the specific reasons supporting the City's action to approve a project with one or more significant unavoidable impacts based on the Final EIR and/or other information in the record.

Draft EIR Sections 4.3 through 4.19 have identified the physical environmental impacts effects that would result from the Baylands Specific Plan, including those impacts that were determined to be less than significant, less than significant with implementation of required mitigation measures,

Relationship of Significant Unavoidable Impacts and Project Approval (CEQA Guidelines Section 15093)

(a) CEQA requires the decision-making agency to balance, as applicable, the economic, legal, social, technological, or other benefits, including region-wide or state-wide environmental benefits, of a proposed project against its unavoidable environmental risks when determining whether to approve the project. If the specific economic, legal, social, technological, or other benefits, including region-wide or state-wide environmental benefits, of a proposed project outweigh the unavoidable adverse environmental effects, the adverse environmental effects may be considered "acceptable."

(b) When the lead agency approves a project which will result in the occurrence of significant effects which are identified in the final EIR but are not avoided or substantially lessened, the agency shall state in writing the specific reasons to support its action based on the final EIR and/or other information in the record. The statement of overriding considerations shall be supported by substantial evidence in the record.

(c) If an agency makes a statement of overriding considerations, the statement should be included in the record of the project approval and should be mentioned in the notice of determination. This statement does not substitute for, and shall be in addition to, findings required pursuant to Section 15091.

[374] For each identified significant effect, CEQA Guidelines Section 15126.4(a)(1) requires an EIR to "describe feasible measures which could minimize significant adverse impacts, including where relevant, inefficient and unnecessary consumption of energy." CEQA Guidelines Section 15364 defines "feasible" as "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors."

and those for which implementation of all feasible mitigation measures would not be capable of reducing the impact to less than significant. Each of the significant unavoidable environmental impacts that would result from the Baylands Specific Plan are identified below.

Impact AQ-1: The Baylands Specific Plan would cause a net increase in emissions of non-attainment criteria pollutants (ROG, NO_X, $PM_{2.5}$, PM_{10}) exceeding BAAQMD Regional Criteria Pollutant Significance Thresholds during construction and for operations at the completion of Phase 1 development, as well as at full Specific Plan buildout.

Impact GHG-1: The Baylands Specific Plan would cause an increase in total greenhouse gas (GHG) emissions generated within the Baylands.

Impact NOI-1: Building construction adjacent to occupied dwelling units within the Baylands and roadway noise increases along four roadway segments would be significant and unavoidable because of the proximity of receptors and unavailability of feasible mitigation strategies sufficient to reduce impacts to less than significant. Additionally, construction noise impacts from installation of pile foundations would remain significant since site-specific geotechnical conditions may require impact pile driving as close as 50 feet to occupied residential uses within the Baylands and generate noise as great as 21 dBA above ambient in proximate off-site locations, exceeding the 10 dBA over existing ambient level standard. Construction noise impacts therefore would be significant and unavoidable with implementation of all feasible mitigation. Additionally, given that construction of foundations for Phase 1 development would occur over a 10-year period and could likely involve some degree of impact pile driving, including simultaneous pile driving at different locations, even with identified mitigation measures, this impact would be significant and unavoidable.

Impact NOI-2: The aggregate operation of all stationary noise sources would increase noise levels generated within the Specific Plan area as a whole. Because the exact future location and configuration for all of these sources cannot be known at this time, it is not possible to ensure that the aggregate increase in noise levels at specific off-site receptor locations from stationary sources would not result in a permanent noise increase in excess of 5 dBA L_{eq}.

Impact NOI-3: Increased noise levels from Baylands-generated traffic would exceed applicable standards along one roadway segment at the conclusion of Phase 1 development (assumed to occur in 2035), increasing to three roadway segments at full Specific Plan buildout (assumed to be 2040).

4.21 PROGRAM EIR MITIGATION MEASURES

4.21.1 INTRODUCTION

Because an EIR was certified for development of the Baylands in August 2018 (Brisbane Baylands Program EIR, State Clearinghouse #2006022136), the preceding impact analyses include applicable mitigation measures from the certified Final Program EIR. This section identifies each Program EIR mitigation measures and indicates the reasons each measure was or was not carried forward from the Program EIR.

Any modifications to Program EIR mitigation measures carried forward into the Specific Plan EIR are presented below in underline/~~strikeout~~ format. Such modifications include:

- Renumbering and providing names for Program EIR mitigation measures consistent with other mitigation measures in this EIR;
- Deleting portions of Program Mitigation Measures that have been implemented in the proposed Specific Plan;
- Modifying outdated references and clarifying the area to which the mitigation measure applies; and
- Revising portions of mitigation measures as required to comply with current legal requirements and standards.

The reasons for any such modifications are presented, where applicable, for each Program EIR mitigation measure.

4.21.2 STATUS OF PROGRAM EIR MITIGATION MEASURES

a. Land Use and Planning Policy

Table 4.21-1: Program EIR Land Use and Planning Policy Mitigation Measures

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	Carry Forward into Chapter 4 Mitigation Measures?	Revisions to Program EIR Mitigation Measure as Presented in Section 4.3
General Plan Consistency	**4.I-1:** "Each of the inconsistencies identified in Table 4.I-1 shall be resolved prior to selection of a Concept Plan or approval of a Specific Plan for development within the Baylands through either modification(s) to the Concept Plan or Specific Plan or amendments to the Brisbane General Plan …"	No. The General Plan inconsistencies identified in Section 4.3, Impact LUP-1, (inconsistency with MTC's Transit-Oriented Communities Policy) were not addressed by Program EIR Mitigation Measure 4.I-1.	

b. Population and Housing

No mitigation measures related to population and housing were proposed in the Program EIR.

c. Aesthetic and Visual Resources

Table 4.21-2: Program EIR Aesthetic and Visual Resources Mitigation Measures

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	**Carry Forward into Chapter 4 Impact Mitigation Measures?**	**Revisions to Program EIR Mitigation Measure as Presented in Section 4.5**
Loss of scenic views of Bay shoreline	**4.A-1a:** Development within 350 feet of the eastern boundary of the Baylands Project Site (US Highway 101) shall be designed to avoid blockage of views of the Bay shoreline from Viewpoints 1, 2, 3, 7, 8, and 11 by limiting the height of buildings within 350 feet of US Highway 101 to a maximum height of 80 feet based on the grading plan included in the proposed Brisbane Baylands Infrastructure Plan. Each specific plan approved for development within the Baylands Project Site shall include development standards setting forth this requirement.	**Yes.** This measure's height limitations within 350 feet of the eastern boundary of the Baylands are needed to mitigate impacts of the current Baylands development project.	**MM AES-1a: Maintain Views of Scenic Resources (Program EIR Mitigation Measure 4.A-1a).** Development within 350 feet of the eastern boundary of the Baylands ~~Project Site~~ Specific Plan area (US Highway 101) shall be designed to avoid blockage of views of the Bay shoreline ~~from Viewpoints 1, 2, 3, 7, 8, and 11 by~~ limiting the height of buildings within 350 feet of US Highway 101 to a maximum height of 80 feet based on the grading plan included in the proposed Brisbane Baylands Infrastructure Plan (January 2023). ~~Each specific plan approved for development within the Baylands Project Site shall include development standards setting forth this requirement.~~ *Reason for revisions to this Program EIR Mitigation Measure:* *Renumbering and adding a title to this measure is needed for consistency with all mitigation measures contained in this EIR.* • *Because the term "Project site" encompasses an area larger than the Baylands, revisions were needed to focus implementation of this measure on the physical area affected by the impact that requires mitigation consistent with the original intent of Program EIR Mitigation Measure 4.A-1a.* • *The listing of viewpoints in the Program EIR is outdated.* • *The requirement for adoption of a single specific plan for the entirety of the Baylands would be implemented by the Baylands Specific Plan currently being considered by the City.*

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	**Carry Forward into Chapter 4 Impact Mitigation Measures?**	**Revisions to Program EIR Mitigation Measure as Presented in Section 4.5**
			• *The reference to the Baylands Infrastructure Specific was modified to reflect the specific date of that document.*
Loss of scenic views of Bay shoreline	**4.A-1b:** Development within 350 feet of the eastern boundary of the Project Site (US Highway 101) shall be designed to avoid blockage of views of the Bay shoreline from Viewpoints 1, 2, 8, and 11. Each specific plan approved for development within the Project Site shall include development standards setting forth this requirement. These standards shall include a requirement that buildings within 350 feet of US Highway 101 be no greater than 80 feet in height.	**No.** This measure addresses impacts of concept plan scenarios that were rejected when General Plan Amendment GP-1-18 was adopted and is not relevant to the current Baylands development project.	
Differences in the intensity of Baylands development compared to existing surrounding development	**4.A-3:** All site-specific development projects within the Project Site shall be subject to the following minimum standards, which shall be set forth in required specific plan(s) prepared for development of the Project Site: • ***Landscaping/Open Space:*** Landscaping and open space areas shall be designed to provide usable outdoor spaces; to provide a pedestrian orientation within residential (DSP and DSP-V scenarios) and non-residential development areas; and to avoid the appearance of a solid mass of buildings as viewed from within the Project Site, from US Highway 101, from Bayshore Boulevard, and from the representative viewpoints shown in Figure 4.A-1. • ***Development Intensity, Setbacks, Stepbacks, and Building Heights:*** Variations, including reductions in the development intensity of site-specific development sites within the Project Site from the maximum allowable development intensity, shall be provided to	**No.** Program EIR Mitigation Measure 4.A-3 was implemented by the current Specific Plan.	

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	**Carry Forward into Chapter 4 Impact Mitigation Measures?**	**Revisions to Program EIR Mitigation Measure as Presented in Section 4.5**
	maintain compatibility with the development intensity of surrounding neighborhoods and community areas. Variations in building heights (reductions from maximum allowable heights), along with appropriate building setbacks and provision of buildings stepbacks in height, shall be employed to maintain a feeling of openness within Project Site open space areas; to maintain compatibility with the scale of historic structures being preserved onsite; to reduce the perceived intensity of development as viewed from the Geneva Avenue extension, Bayshore Boulevard, US 101 freeway, and Viewpoints 1, 2, 3, 7, 8, and 11; and to provide view corridors through the Baylands so that development is not perceived as a solid mass of buildings when viewed from downtown Brisbane or the US 101 freeway. • ***Roofs:*** Roof design shall be compatible with the building design and articulation, emphasizing color, form, and materials. Rooftop mechanical equipment shall be screened from visibility from the representative viewpoints shown in Figure 4.A-1. Roofs shall incorporate opportunities for solar panels, which when installed need not be screened from view. • ***Fenestration:*** Window patterns shall be well proportioned to the building, shall be varied to achieve diversity in architecture, and shall provide adequate light and air to interiors. • ***Building Articulation:*** Facade articulation of a minimum of five feet shall be required at minimum intervals of 80 feet.		

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	Carry Forward into Chapter 4 Impact Mitigation Measures?	Revisions to Program EIR Mitigation Measure as Presented in Section 4.5
	• ***Building Materials:*** Materials shall be high quality with textures and colors that further accentuate building design. Changes in building materials along a building face shall relate to building massing. • ***Signage:*** Signage shall complement building design in material, scale, lettering, and lighting and enhance the public realm. • ***Transparency:*** In retail buildings along publicly accessible frontages, 40 to 60 percent of ground-floor wall areas shall be transparent. • ***Building Facades:*** Building design shall avoid large flat wall areas unbroken by protections, recesses, or other architectural features. Entrances shall be appropriately scaled and easy to find. • ***Outdoor Storage and Mechanical Equipment:*** Any permitted outdoor storage or mechanical equipment shall be fully screened from view from areas accessible to the general public, as well as from the representative viewpoints shown in Figure 4.A-1. • ***Parking:*** Podium or structured parking shall be wrapped with active uses at ground level and not exposed to the street. As part of the approval of specific plan(s) for development within the Project Site, the City shall first make the finding that the design standards and guidelines contained in the specific plan set forth, at a minimum, these standards. As part of the approval of all subsequent site-specific development within the Project Site, the approving body for such development shall first make the finding that the site-specific		

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	**Carry Forward into Chapter 4 Impact Mitigation Measures?**	**Revisions to Program EIR Mitigation Measure as Presented in Section 4.5**
	development being reviewed meets the standards and guidelines set forth in the applicable specific plan implementing the requirements of this mitigation measure.		
Nighttime lighting	**4.A-3:** All development within the Project Site shall comply with the following lighting design standards in order to minimize project lighting to the extent required for safety and comfort only in order to reduce nighttime lighting effects: • Limit light spill across the property lines, such that illumination at the property line of any use within the Project Site that is attributable to the subject property does not exceed 0.1 foot-candles on business properties and 0.05 foot-candles on residential properties and open space areas. On-site lighting of site-specific development within the Project Site shall result in zero direct-beam illumination leaving the site. • Street lighting shall be comprised of shorter, pedestrian-scaled fixtures, rather than tall cobra head fixtures. • Off-street pedestrian walkways and trails shall have bollard-type lighting to ensure visibility and safety for pedestrians, cyclists, and others. • Laser source lights and searchlights, and any other high-intensity light for outdoor advertising or entertainment used to attract attention to commercial activities or community events, shall be prohibited. • Light fixtures that produce a warm light and focus the light downward onto the pedestrian zone shall be selected.	**Yes.** Since the current Specific Plan does not incorporate the entire Program EIR Mitigation Measure 4.A-3, it is carried forward from the Program EIR.	~~**4.A-4a**~~ **MM AES-4a**: **Outdoor Lighting Standards**. All development within the ~~Project Site~~ Baylands shall comply with the following lighting design standards in order to minimize project Baylands development lighting~~ to the extent required for safety and comfort only in order to reduce nighttime lighting effects~~: • ~~Limit light spill across the property lines, such that illumination at the property line of any use within the Project Site that is attributable to the subject property does not exceed 0.1 foot-candles on business properties and 0.05 foot-candles on residential properties and open space areas. On-site lighting of site-specific development within the Project Site shall result in zero direct-beam illumination leaving the site.~~ • ~~Street lighting shall be comprised of shorter, pedestrian-scaled fixtures, rather than tall cobra head fixtures.~~ • ~~Off-street pedestrian walkways and trails shall have bollard-type lighting to ensure visibility and safety for pedestrians, cyclists, and others.~~ • ~~Laser source lights and searchlights, and any other high-intensity light for outdoor advertising or entertainment used to attract attention to commercial activities or community events, shall be prohibited.~~ • ~~Light fixtures that produce a warm light and focus the light downward onto the pedestrian zone shall be selected.~~

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	**Carry Forward into Chapter 4 Impact Mitigation Measures?**	**Revisions to Program EIR Mitigation Measure as Presented in Section 4.5**
	• Landscape lighting shall be unobtrusive and shielded to prevent glare such as bollard-type fixture or ground-mounted up-lights for trees. • Entry monuments shall be lighted with low-level lights with fixtures concealed to highlight the names, maps, etc. • Exterior lighting shall be kept to the minimum required for safety; purely decorative lighting displays shall be prohibited. • All parking lot, recreational area, walkway, and trail lighting shall have no light emitted above 90 degrees. Project lighting shall be designed to control light energy and ensure that exterior lighting is directed downward and away from adjacent streets and buildings in a manner designed to minimize off-site light spillage. • A master plan for street and parking lot lighting shall be approved by the City prior to final approval of design plans for roadways within the Brisbane portion of the Project Site. o All streets within the Brisbane portion of the Project Site shall have uniform lighting standards with regard to style, colors, and materials in order to ensure consistency with design. o Parking lot lighting shall be of the same source of illumination as street lighting so as to ensure uniformity of night lighting color. o Due to their high-energy efficiency, long life, and spectral characteristics, Narrow-Spectrum Amber LEDs shall be the		• ~~Landscape lighting shall be unobtrusive and shielded to prevent glare such as bollard-type fixture or ground-mounted up-lights for trees.~~ • ~~Entry monuments shall be lighted with low-level lights with fixtures concealed to highlight the names, maps, etc.~~ • ~~Exterior lighting shall be kept to the minimum required for safety; purely decorative lighting displays shall be prohibited.~~ • ~~All parking lot, recreational area, walkway, and trail lighting shall have no light emitted above 90 degrees.~~ • ~~Project lighting shall be designed to control light energy and ensure that exterior lighting is directed downward and away from adjacent streets and buildings in a manner designed to minimize off-site light spillage.~~ • A master plan for street and parking lot lighting shall be approved by the City prior to final approval of design plans for roadways within the Brisbane portion of the Project Site. o All streets within the ~~Brisbane portion of the Project Site~~ Specific Plan area shall have uniform lighting standards with regard to style, colors, and materials in order to ensure consistency with design. o Parking lot lighting shall be of the same source of illumination as street lighting so as to ensure uniformity of night lighting color. o Due to their high-energy efficiency, long life, and spectral characteristics, Narrow-Spectrum Amber LEDs shall be the preferred illumination source throughout the Brisbane portion of the ~~Project Site~~ Specific Plan area. • A photometric analysis and lighting plan shall be prepared for each development project to

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	**Carry Forward into Chapter 4 Impact Mitigation Measures?**	**Revisions to Program EIR Mitigation Measure as Presented in Section 4.5**
	preferred illumination source throughout the Brisbane portion of the Project Site. • A photometric analysis and lighting plan shall be prepared for each development project. The photometric analysis shall include an assessment of potential lighting impacts based on the height, location, light fixtures, direction, illumination intensity, and hours of operation. This analysis shall identify any potential light spill beyond the boundary of the specific plan, as well as light spill beyond the boundaries of individual sites within the Project Site Lighting performance standards as described above shall apply. The lighting plan shall demonstrate maintenance, to the maximum extent feasible, of ambient light levels as measured from 100 feet from the individual site. The lighting plan shall be submitted to the Community Development Department and City Engineer for final approval prior to approval of a building permit. When reviewing illumination plans, the City will review the following factors to determine the level of illumination required. • **Purpose:** The function and activities for the planned area; • **Safety:** The level of comfort and security needed to be provided; • **Aesthetics:** The overall appearance of proposed lighting with respect to the Baylands and surrounding community; and • **Impacts:** The extent to which proposed lighting minimizes impacts on adjacent land		demonstrate compliance with applicable nighttime lighting standards, requirements, and mitigation measures. The photometric analysis shall include an assessment of potential lighting impacts based on the height, location, light fixtures, direction, illumination intensity, and hours of operation. ~~This analysis shall identify any potential light spill beyond the boundary of the specific plan, as well as light spill beyond the boundaries of individual sites within the Project Site. Lighting performance standards as described above shall apply. The lighting plan shall demonstrate maintenance, to the maximum extent feasible, of ambient light levels as measured from 100 feet from the individual site.~~ The lighting plan shall be submitted to the Community Development Department and City Engineer for final approval prior to approval of a building permit. When reviewing illumination plans, the City will review the following factors to determine the level of illumination required. • **Purpose:** The function and activities for the planned area; • **Safety:** The level of comfort and security needed to be provided; • **Aesthetics:** The overall appearance of proposed lighting with respect to the Baylands and surrounding community; and • **Impacts:** The extent to which proposed lighting minimizes impacts on adjacent land uses, maintains the area's dark night sky, and conserves energy. *Reason for revisions to this Program EIR Mitigation Measure:* • *Renumbering and adding a title to this measure was needed for consistency with all mitigation measures contained in this EIR.*

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	**Carry Forward into Chapter 4 Impact Mitigation Measures?**	**Revisions to Program EIR Mitigation Measure as Presented in Section 4.5**
	uses, maintains the area's dark night sky, and conserves energy.		• *Because the term "Project site" encompasses an area larger than the Baylands, revisions were needed to focus implementation of this measure on the physical area affected by the impact that requires mitigation.* • *Provisions of this measure that have been implemented by the Specific Plan or superseded by Municipal Code Chapter 15.88 have been deleted.* • *The measure has been revised to ensure that the required photometric survey addresses nighttime lighting requirements included in all mitigation measures.*
Daytime Glare	**4.A-4b:** All building exteriors within the Baylands Project Site shall be composed of textured and other non-reflective materials, including high-performance tinted non-mirrored glass. Any reflective materials on building exteriors that have a light reflectivity factor greater than 30 percent shall be positioned so as to not reflect daytime glare onto the 101 freeway or onto existing residential communities in Brisbane and Visitacion Valley. Mirrored glass shall be prohibited.	**Yes.** This measure's requirements for building exterior materials are needed to mitigate impacts of the Specific Plan project.	~~**4.A-4b**~~ **MM AES-5a: Prevent Daytime Glare.** All building exteriors within the Baylands Specific Plan area ~~Project Site~~ shall be composed of textured and other non-reflective materials, including high-performance tinted non-mirrored glass. Any reflective materials on building exteriors that have a light reflectivity factor greater than 30 percent shall be positioned so as to not reflect daytime glare onto the US 101 freeway or onto existing residential communities in Brisbane and Visitacion Valley. Mirrored glass shall be prohibited. *Reason for revisions to this Program EIR Mitigation Measure:* • *Renumbering and adding a title to this measure was needed for consistency with all mitigation measures contained in this EIR.* • *Because the term "Project site" encompasses an area larger than the Baylands, revisions were needed to focus implementation of this measure on the physical area affected by the impact that requires mitigation.*

d. Biological Resources

Table 4.21-3: Program EIR Biological Resources Mitigation Measures

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	**Carry Forward or Modify into Specific Plan EIR?**	**Mitigation Measures Carried Forward into the Baylands Development EIR**
Adverse effect on candidate, sensitive, or special-status plant and wildlife species	**4.C-1a:** Prior to construction or any other Project Site development-related ground disturbance activities on Icehouse Hill, the applicant shall conduct pre-construction presence/absence surveys for special-status plants. Initial surveys at Icehouse Hill shall be carried out in conjunction with surveys for endangered butterfly host plants as described in **Mitigation Measure 4.C-1c**. Surveys would be implemented to determine if a special-status plant species has colonized the site in the interim between the determination of baseline conditions for this EIR, and project initiation, as well as to provide site-specific direction for final trail routing and design to avoid sensitive plant species (see **Mitigation Measures 4.C-1b** and **4.C-1c**). Surveys shall be conducted in accordance with CNPS and CDFW rare plant survey guidelines and shall be conducted during the flowering period when each species is most readily identifiable. In order to capture variability of special-status plant species distribution, three special-status plant surveys shall be conducted at two-week intervals during the appropriate flowering period (April to June), before commencement of any development activities on Icehouse Hill. Any special-status plant populations shall be mapped in the field (see **Mitigation Measure 4.C-1b**). If the presence of any special-status plant species is confirmed, a copy of the survey results shall be forwarded to CDFW, and **Mitigation Measure 4.C-1b** shall be implemented.	**Yes.** Because of the potential for a special-status plant species to colonize the site in the interim between baseline conditions for this EIR and ground disturbance for habitat and trail improvements, retention of this measure for the Specific Plan is needed.	**MM BIO-1a: Special Status Plant Surveys at Icehouse Hill (Program EIR Mitigation Measure 4.C-1a).** Prior to construction, or any other ~~Project Site~~ Baylands development-related ground disturbance activities on Icehouse Hill, the applicant shall conduct pre-construction presence/absence surveys for special-status plants. Initial surveys at Icehouse Hill shall be carried out in conjunction with surveys for endangered butterfly host plants described in ~~**Mitigation Measure 4.C-1c**~~ EIR Appendix D, *Biological Resources Technical Report*. Surveys would be implemented to determine if a special-status plant species has colonized the site in the interim between the determination of baseline conditions for this EIR, and project initiation, as well as to provide site-specific direction for final trail routing and design to avoid sensitive plant species (see ~~**Mitigation Measures 4.C-1b**~~ MM BIO-1b, Special-Status Plant Avoidance at Icehouse Hill, and ~~**4.C-1c**~~ MM BIO-1c, Rare Butterfly Surveys and Habitat Protection at Icehouse Hill. Surveys shall be conducted in accordance with CNPS and CDFW rare plant survey guidelines and shall be conducted during the flowering period when each species is most readily identifiable. In order to capture variability of special-status plant species distribution, three special-status plant surveys shall be conducted at two-week intervals during the appropriate flowering period (April to June), before commencement of any development activities on Icehouse Hill.

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	**Carry Forward or Modify into Specific Plan EIR?**	**Mitigation Measures Carried Forward into the Baylands Development EIR**
	In the event that special-status plants are not identified within development areas, including areas used for construction, the additional mitigation identified in **Mitigation Measure 4.C-1b** is not required.		Any special-status plant populations shall be mapped in the field ~~(see **Mitigation Measure 4.C-1b**)~~. If the presence of any special-status plant species is confirmed, a copy of the survey results shall be forwarded to the CDFW, and **Mitigation Measure ~~4.C-1b~~ MM BIO-1b** shall be implemented. Whether or not special-status plants are identified during surveys, the additional mitigation identified in MM BIO-1c, Rare Butterfly Surveys and Habitat Protection at Icehouse Hill, shall be implemented to avoid special-status plants and butterfly host plants. *Reasons for revisions to this Program EIR Mitigation Measure:* • *Renumbering and adding a title to this measure is needed for consistency with all mitigation measures contained in this EIR.* • *Because the term "Project site" encompasses an area larger than the Baylands, revisions were needed to focus implementation of this measure on the physical area affected by the impact that requires mitigation consistent with the original intent of Program EIR Mitigation Measure 4.C-1a.* • *Since protocol surveys for host and nectar plants for sensitive butterfly species were undertaken for this EIR, references to Program EIR Mitigation Measure 4.C-1b needed to be updated to reference Appendix D, Biological Resources Technical Report, of this EIR.* • *To clarify the intent of the Program EIR mitigation measure, text is provided to ensure MM BIO-1c (Program EIR mitigation measure 4.C-1c) is implemented regardless of survey findings.*

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	**Carry Forward or Modify into Specific Plan EIR?**	**Mitigation Measures Carried Forward into the Baylands Development EIR**
Adverse effect on candidate, sensitive, or special-status plant and wildlife species	**4.C-1b:** Documented plant occurrences on Icehouse Hill shall be avoided by establishing a buffer zone of no less than 25 feet prior to Project trail construction, or other ground-disturbing activities having the potential to disturb or result in mortality of special-status plant populations. This buffer zone, whose specific width shall be determined based on site-specific analysis of proposed construction techniques and their potential for dust creation, shall be demarcated using flagging, orange fencing, or any other visual barrier between plant populations and the active disturbance footprint. Buffer distances may be increased if hydrology features would be altered as a result of trail construction. Trail configurations shall be sited to avoid special-status plants and *Viola pedunculata*. In the event the City determines that trail construction cannot be accomplished without disturbance or mortality then trail construction would be abandoned and Icehouse Hill would remain closed for public uses. To reduce impacts from off-trail use, and increased horse use in association with trail riding, trail head signage shall be required to educate the public regarding sensitive resources and restoration that would be affected by off-trail use. Protected areas shall be marked in perpetuity. Trail use rules shall be developed prior to trail construction, and in addition to limiting use to identified trails, may include other requirements to limit the possibility that sensitive species would be impacted. As part of trail construction, native grasses, and host plant species for special status butterflies shall be planted to enhance the existing habitat and assist in soil stabilization on Icehouse Hill. A planting palette shall be designed by a qualified botanist in coordination with the San Bruno Mountain Habitat	**Yes.** Program EIR Mitigation Measure 4.C-1b, which addresses impacts of trail construction on Icehouse Hill, is relevant to the current Specific Plan project and is carried forward into the Specific Plan EIR.	**MM BIO-1b: Special-Status Plant Avoidance at Icehouse Hill (Program EIR Mitigation Measure 4.C-1b).** Documented plant occurrences on Icehouse Hill shall be avoided by establishing a buffer zone of no less than 25 feet prior to Specific Plan trail construction, or other ground-disturbing activities having the potential to disturb or result in mortality of special-status plant populations. This buffer zone, whose specific width shall be determined based on site-specific analysis of proposed construction techniques and their potential for dust creation, shall be demarcated using flagging, orange fencing, or any other visual barrier between plant populations and the active disturbance footprint. Buffer distances may be increased if hydrology features would be altered as a result of trail construction. ~~Trail configurations shall be sited to avoid special-status plants and *Viola pedunculata*. In the event the City determines that trail construction cannot be accomplished without disturbance or mortality then trail construction would be abandoned and Icehouse Hill would remain closed for public uses.~~ If the City determines that disturbance or mortality is unavoidable, special-status plants shall be restored onsite in either the annual grassland or coastal scrub habitat located on Icehouse Hill. Restoration would be at a 1:1 ratio consistent with typical CDFW requirements in areas that are to remain as post-development open space, as is Icehouse Hill. The 1:1 replacement ratio shall be met at the end of five years and may therefore require initial plantings at a greater than 1:1 ratio, as determined by a qualified botanist. If feasible, special-status plants and/or seeds shall be salvaged from on-site plants and used for any replacement plantings.

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	Carry Forward or Modify into Specific Plan EIR?	Mitigation Measures Carried Forward into the Baylands Development EIR
	Conservation Plan using plant species that are known to have high survival rates and are compatible with the flora and fauna of the region, as proven by successful restoration efforts on San Bruno Mountain.		To reduce impacts from off-trail use, and increased horse use, trail head signage shall be required to educate the public regarding sensitive resources and restoration that would be affected by off-trail use. ~~Protected areas shall be marked in perpetuity~~ Mitigation areas shall be fenced or marked for three years. Trail use rules shall be developed prior to construction, and in addition to limiting use to identified trails, may include other requirements to limit the possibility that sensitive species would be impacted. ~~As part of trail construction, native grasses, and host plant species for special status butterflies shall be planted to enhance the existing habitat and assist in soil stabilization on Icehouse Hill. A planting palette shall be designed by a qualified botanist in coordination with the San Bruno Mountain Habitat Conservation Plan using plant species that are known to have high survival rates and are compatible with the flora and fauna of the region, as proven by successful restoration efforts on San Bruno Mountain.~~ To avoid indirect impacts to special status plant species that could occur if slope drainage or surface hydrology is modified as a result of trail construction Mitigation Measure 4.C1-g shall also be applied. Prior to issuance of project approvals, and in coordination with state and federal permitting requirements, a five-year restoration mitigation and monitoring program shall be developed and implemented for any planting areas established to mitigate impacts to special-status species plants. Restoration success criteria shall include: 1) Establishment of mitigation site(s) at or near the location of impacts where plant restoration will occur.

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			2) A qualified botanist shall identify an appropriate plant palette and restoration methodology compatible with the specific impacted special status species. Mitigation sites could include existing annual grassland or coastal scrub habitat areas on Icehouse Hill, depending on site conditions and locations of special status plants found. 3) No loss in total number of individual plants in a special status plant population found on Project Site shall be verified at the end of the five-year monitoring period established in coordination with state and federal agencies with jurisdiction over these resources. *Reasons for revisions to this Program EIR Mitigation Measure:* • *Renumbering and adding a title to this measure is needed for consistency with all mitigation measures contained in this EIR.* • *Edits de-emphasized the avoidance of butterfly host plants, which are not special-status plants, and put emphasis on restoration of special-status plants.* • *Greater definition added to performance standards for rare plant mitigation plantings.* • *Providing signage in perpetuity unneeded for mitigation areas and was removed. New language was added to fence such areas from the public.* • *Butterfly habitat enhancement actions (e.g., planting native grasses and host plants) were moved to the butterfly habitat protection mitigation measure (Mitigation Measure MM BIO-1c).*

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Adverse effect on candidate, sensitive, or special-status plant and wildlife species	**4.C-1c:** Prior to any trail-related construction, vegetation management, development, or any other ground disturbing activities taking place on Icehouse Hill, pre-construction surveys for butterfly larval host plants (*Viola pedunculata*, *Lupinus albifrons*, *L. formosus*, and *L. versicolor*) shall be conducted by a qualified invertebrate biologist with demonstrated experience working with the species to ensure avoidance of such host plants. Required surveys may be conducted in conjunction with the rare plant surveys required under **Mitigation Measure 4.C-1a**. The timing for these preconstruction surveys is further specified, below. All populations of butterfly host plants located on Icehouse Hill shall be mapped and trails shall be designed to avoid them, whether or not they are being used by butterflies at the time of the initial surveys. All populations of butterfly host plants located on Icehouse Hill shall be inspected by a qualified invertebrate biologist, at an appropriate time of year, to determine whether or not they are being used by endangered butterflies for reproduction. If it is determined that they are being used for reproductive purposes by endangered butterflies, the specific project applicant shall contact USFWS to identify the appropriate consultation process prior to proceeding further with any activities on Icehouse Hill. Consultation may indicate that an Incidental Take Permit is required pursuant to the FESA. If populations of callippe silverspot or Mission blue butterflies are determined to be reproducing on Icehouse Hill, the property owner shall prepare and implement a Butterfly Protection Plan in coordination with the USFWS and the habitat managers for the SBMHCP prior to any ground-disturbing activities on or adjacent to Icehouse Hill.	**Yes.** Program EIR Mitigation Measure 4.C-1c, which addresses protection of butterfly larval host plants on Icehouse Hill, is relevant to the current Specific Plan project and is carried forward into the Specific Plan EIR.	**MM BIO-1c: Rare Butterfly Surveys and Habitat Protection at Icehouse Hill (Program EIR Mitigation Measure 4.C-1c).** Prior to any trail-related construction, vegetation management, development, or any other ground disturbing activities taking place on Icehouse Hill, pre-construction surveys for butterfly larval host plants (*Viola pedunculata*, *Lupinus albifrons*, *L. formosus*, and *L. versicolor*) shall be conducted by a qualified invertebrate biologist with demonstrated experience working with the species to ensure avoidance of such host plants. Required surveys may be conducted in conjunction with the rare plant surveys required under ~~**Mitigation Measure 4.C-1a**~~ MM BIO-1a, Special Status Plant Surveys at Icehouse Hill. The timing for these preconstruction surveys is further specified below. All populations of butterfly host plants located on Icehouse Hill shall be mapped and trails shall be designed to avoid them, whether or not they are being used by butterflies at the time of the initial surveys. All populations of butterfly host plants located on Icehouse Hill shall be inspected by a qualified invertebrate biologist, at an appropriate time of year, to determine whether or not they are being used by endangered butterflies for reproduction. If it is determined that they are being used for reproductive purposes by endangered butterflies, the specific project applicant shall contact the USFWS to identify the appropriate consultation process prior to proceeding further with any activities on Icehouse Hill. Consultation may indicate that an Incidental Take Permit is required pursuant to the FESA. If populations of Callippe silverspot or Mission blue butterflies are determined to be reproducing on

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	The plan shall include, but not be limited to, the following elements: i. Pre-construction surveys shall be conducted during the period of identification for larval host plants and butterfly larvae in the flowering and/or breeding season immediately prior to trail construction or any other work scheduled to occur on Icehouse Hill. ii. Trail construction on Icehouse Hill shall avoid populations of larval host plants. iii. All trails, or alternately, sensitive habitats, shall be fenced to minimize the establishment of "informal" trails through habitats supporting special-status plants. iv. Dogs shall be allowed on Icehouse Hill trails on leash only. v. Interpretative signage shall be posted at trailheads explaining the presence of endangered butterflies and/or their habitat and the importance of preserving Icehouse Hill as habitat for endangered species. vi. Establishment of seasonal restrictions or a period during which horses would be permitted to occur on Icehouse Hill associated with passive recreation areas shall be implemented in a manner that coordinates best with the use pattern of special status butterflies, under consultation with a Lepidopterist. Grassland habitat on Icehouse Hill shall be restored and enhanced to maintain and expand healthy populations of butterfly host plants. This shall include regular and ongoing management of non-native invasive species, such as French broom and fennel, as well as revegetation with native grassland species and establishment of new populations of butterfly host plants for callippe		Icehouse Hill, the property owner shall prepare and implement a Butterfly Protection Plan in coordination with the USFWS and the habitat managers for the ~~SBMHCP~~ San Bruno Mountain Habitat Conservation Plan prior to any ground-disturbing activities on or adjacent to Icehouse Hill. The plan shall include, but not be limited to, the following elements: i. Pre-construction surveys shall be conducted during the period of identification for larval host plants and butterfly larvae in the flowering and/or breeding season immediately prior to trail construction or any other work scheduled to occur on Icehouse Hill. ii. Trail construction on Icehouse Hill shall avoid populations of larval butterfly host plants. iii. All trails, or alternately, sensitive habitats, shall be fenced to minimize the establishment of "informal" trails through habitats supporting special-status plants. iv. Dogs shall be allowed on Icehouse Hill trails on leash only. v. Interpretative signage shall be posted at trailheads explaining the presence of endangered butterflies and/or their habitat and the importance of preserving Icehouse Hill as habitat for endangered species. ~~Establishment of seasonal restrictions or a period during which horses would be permitted to occur on Icehouse Hill associated with passive recreation areas shall be implemented in a manner that coordinates best with the use pattern of special status butterflies, under consultation with a Lepidopterist.~~ Grassland habitat on Icehouse Hill shall be restored and enhanced to maintain and expand healthy

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	silverspot and Mission blue butterfly species, particularly lupine host species and Veolia species. These efforts shall be planned in coordination with similar SBMHCP efforts and according to the butterfly habitat restoration and vegetation management guidelines that have been established for the SBMHCP (San Mateo County, 2007). The criteria for successful implementation of habitat restoration shall be no loss of butterfly habitat and at least 50 percent cover (includes at least two of the lupine species used by butterflies) in restored areas after five years.		populations of butterfly host plants <u>according to the following performance standards:</u> • <u>No net loss of existing butterfly host plants or damage to existing butterfly habitat or host plants from the trail and other recreational improvements, with habitat monitoring provided in years 1, 3, and 5.</u> • <u>Reintroduced nectar and host plants for the Callippe silverspot, Bay checkerspot, and Mission blue butterflies achieve 50 percent cover in designated Habitat Management Areas within five years.</u> • <u>Non-native invasive species such as French broom and fennel shall kept to a minimum within management areas.</u> ~~This shall include regular and ongoing management of non-native invasive species, such as French broom and fennel, as well as revegetation with native grassland species and establishment of new populations of butterfly host plants for callippe silverspot and Mission blue butterfly species, particularly lupine host species and Veolia species. These efforts shall be planned in coordination with similar SBMHCP efforts and according to the butterfly habitat restoration and vegetation management guidelines that have been established for the SBMHCP (San Mateo County, 2007). The criteria for successful implementation of habitat restoration shall be no loss of butterfly habitat and at least 50 percent cover (includes at least two of the lupine species used by butterflies) in restored areas after five years.~~ *Reasons for revisions to this Program EIR Mitigation Measure:*

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			• *Renumbering and adding a title to this measure is needed for consistency with all mitigation measures contained in this EIR.* • *The acronym SBMHCP is spelled out for clarity.* • *Reference to "larval host plants" is revised to "larval butterfly host plants" for clarity.* • *With the addition of fencing, horses would not have access to sensitive butterfly habitat. Hence, seasonal use restrictions for horses were unnecessary.* • *Greater definition was added to performance standards for butterfly habitat restoration and enhancements, including standards for retaining host plants, goals for butterfly nectar plant densities, and clarification on the management of non-native vegetation within these areas.*
Adverse effect on candidate, sensitive, or special-status plant and wildlife species	**4.C-1d:** The following steps shall be taken to avoid direct losses of nests, eggs, and nestlings and indirect impacts to special status avian species. Vegetation removal, including removal of trees and shrubs as part of site development, shall be confined to the non-breeding season, except as provided for below. Grading or ground disturbance activities associated with site development including site remediation activities shall occur after pre-construction protocol burrowing owl surveys are conducted as described below and in the 2012 CDFW Staff Report on Burrowing Owls. • If removal of trees and shrubs or disturbance to trees and shrubs (i.e., tree removal, tree trimming) is proposed to occur between January 1 and September 15, a qualified avian biologist shall survey any trees proposed to be removed or trimmed during the nesting season (i.e., January 1 through September 15) to determine if active nests are present. Surveys shall occur not	**Yes.** Although surveys conducted for this EIR concluded that there is no burrowing owl habitat on-site, there is now an unconfirmed iNaturalist sighting of this species from 2016. Due to the recent change in listing status for this species, this mitigation measure, which includes actions to survey for and protect burrowing owl, is to be carried forward from the Program EIR.	**MM BIO-1d: Nesting Bird Protection (Program EIR Mitigation Measure 4.C-1d).** The following steps shall be taken to avoid direct losses of nests, eggs, and nestlings and indirect impacts to common and special-status avian species. Vegetation removal including removal of trees and shrubs as part of site development shall be confined to the nonbreeding season, except as provided for below. Grading or ground disturbance activities associated with site development including site remediation activities shall occur after pre-construction protocol burrowing owl surveys are conducted as described below and in the 2012 CDFW Staff Report on Burrowing Owls. • If removal of trees and shrubs or disturbance to trees and shrubs (i.e., tree removal, tree trimming) or grading is proposed to occur between January 1 and September 15, a qualified avian biologist shall survey any ~~trees~~ habitat proposed to be ~~removed or trimmed~~

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	more than 14 days prior to tree removal or trimming. If active nests are found, tree removal and/or tree trimming shall be conducted only after the young have left the nest and the nest is no longer in use. Confirmation that the nest is no longer in use shall be provided by a qualified biologist familiar with the species. If the qualified avian biologist identifies active nests, a no disturbance buffer of 150 feet shall be established and monitored by a qualified avian biologist, with authority to stop work in the event construction activities encroach within the disturbance buffer thus ensuring that impacts to nesting birds would not occur. Survey and monitoring reports shall be submitted to City staff for review: preconstruction survey reports shall be submitted prior to initiating construction activities; monitoring reports shall be submitted weekly until activities associated with nest habitat removal or disturbance activities are completed. • Prior to initiating ***grading or ground disturbance activities*** associated with remediation activities required prior to site development, the following shall occur: o Not less than 45 days prior to site grading, a qualified biologist shall survey the site to determine the presence of active burrowing owl nests. If active nests are found passive relocation of the individuals would be accomplished according to the CDFW standards in effect at the time of the survey, including the 2012 CDFW Staff Report on Burrowing Owls. o Results of the burrowing owl survey will be forwarded to CDFW.		modified during the nesting season (i.e., January 1 through September 15) to determine if active bird nests are present. Surveys shall occur not more than 14 days prior to tree removal or trimming. Surveys shall include all trees in line-of-sight and within 500 feet of construction for raptors, and all vegetation (including bare ground within 250 feet) for all other species. If active nests are found, tree removal and/or tree trimming shall be conducted only after the young have left the nest and the nest is no longer in use. Confirmation that the nest is no longer in use shall be provided by a qualified biologist familiar with the species. If the qualified avian biologist identifies active nests, a no disturbance buffer of 150 feet shall be established and monitored by a qualified avian biologist, with authority to stop work in the event construction activities encroach within the disturbance buffer thus ensuring that impacts to nesting birds would not occur. Survey and monitoring reports shall be submitted to City staff for review: preconstruction survey reports shall be submitted prior to initiating construction activities; monitoring reports shall be submitted weekly until activities associated with nest habitat removal or disturbance activities are completed. • At all times of year, prior to initiating grading or ground disturbance activities associated with remediation activities required prior to site development, the following shall occur: o Not less than 45 days prior to site grading, a qualified biologist shall survey the site to determine the presence of active burrowing owl nests. If active nests are found passive

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	Should the results of the survey include positive finding for occupied burrows, the location and condition of the burrows shall be reported to the CDFW, and an on-site mitigation plan shall be prepared for review and approval by the CDFW. Onsite mitigation shall include construction of artificial burrows at a ratio of not less than 1:1 with the burrows located away from areas permitted for use by dogs and hikers. Following construction of the artificial burrows, the existing owls shall be passively removed from their burrows using one-way trap doors. The artificial burrows shall be monitored for a period of five years to confirm occupation by the species. Monitoring reports shall be forwarded to the CDFW to document compliance with this mitigation measure.		relocation of the individuals would be accomplished according to the CDFW standards in effect at the time of the survey including the 2012 CDFW Staff Report on Burrowing Owls. o Results of the burrowing owl survey will be forwarded to CDFW. Should the results of the survey include positive findings for occupied burrows, the location and condition of the burrows shall be reported to the CDFW and an on-site mitigation plan shall be prepared for review and approval by the CDFW. Onsite mitigation shall include construction of artificial burrows at a ratio of not less than 1:1 with the burrows located away from areas permitted for use by dogs and hikers. Following construction of the artificial burrows, the existing owls shall be passively removed from their burrows using one-way trap doors. The artificial burrows shall be monitored for a period of five years to confirm occupation by the species. Monitoring reports shall be forwarded to the CDFW to document compliance with this mitigation measure. *Reason for revisions to this Program EIR Mitigation Measure:* • *Renumbering and adding a title to this measure is needed for consistency with all mitigation measures contained in this EIR.* • *To clarify and streamline survey requirements relative to nesting birds, PEIR Mitigation Measure 4.C-4f has been combined with this measure. Several elements of that measure were added here to clarify that nesting bird survey areas should consider areas within 500 feet of disturbance areas, and to explain that avian surveys are needed for all habitat modifications, not just for removal of trees and shrubs.*

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			• *The burrowing owl bullet was updated to reflect that owl surveys should occur in advance of grading at all times of year, owing to the possible presence of overwintering burrowing owls that may be within burrows on the site.*
Adverse effect on candidate, sensitive, or special-status plant and wildlife species	**4.C-1e:** Prior to construction of any wind turbines within the Project Site, the applicant for such wind turbines shall prepare a site-specific micrositing report in designing the proposed turbine layout that incorporates modeling of raptor species' flight patterns, hovering or kiting patterns, bat roosting habitat areas and foraging areas. The report shall provide micrositing recommendations to reduce avian collision and impacts to bat species that shall be implemented in the final design and placement of wind turbines. Utilization data; digital elevation modeling; slope attributes; techniques to identify saddles, notches, and benches; and associations between bird utilization and topography may be included, for example. The report shall include adaptive management during and after Project Site construction using information gathered in the pre-construction assessment to guide possible Project modifications, mitigation, or the need for and design of post-construction studies; post-construction studies can test design modifications and operational activities to determine their effectiveness in avoiding or minimizing significant adverse impacts (USFWS, 2010b). The design of wind turbines shall minimize the use of above ground electrical cabling; be designed with solid surfaces that are not conducive to perching; not run when visibility is poor, such as at night and during periods of heavy fog; and be designed with low rotor speeds (20 rpm maximum).	**No.** Because wind turbines are not proposed in the 2025 Specific Plan, Mitigation Measure 4.C-1e is not carried forward into the Specific Plan EIR.	

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Adverse effect on candidate, sensitive, or special-status plant and wildlife species	**4.C-1f:** Prior to construction or operation of wind turbines within the Project Site, the applicant shall implement the following mitigation measure, which is based upon the California Bat Working Group *Guidelines for Assessing and Minimizing Impacts to Bats at Wind Energy Development Sites in California* (CBWG, 2006). These measures will help to mitigate the Project's effects on bats by addressing the data gaps that prevent adequate assessment of the Project's effects on bats, such as what bat species are using the site and how they are using the Project area. The applicant shall contribute to the body of knowledge on bat/turbine interactions by performing pre-construction and post-construction surveys, and post-construction monitoring within the Project area at each discrete location of a wind turbine or solar facility.	**No.** Because wind turbines are not proposed in the 2025 Specific Plan, Mitigation Measure 4.C-1f is not carried forward into the Specific Plan EIR.	
Adverse effect on candidate, sensitive, or special-status plant and wildlife species	**4.C-1g:** Construction and operation of proposed uses and open space areas along Visitacion Creek or adjacent to the northern lagoon edge shall include implementation of erosion control and water pollution control measures consistent with Storm Water Pollution Prevention Program (SWPPP) requirements, and implementation of an on-going maintenance plan to ensure no reduction in water and environmental quality within the Creek and lagoon. Project applicants shall provide the City with proof that appropriate stormwater permits have been obtained pursuant to the City of Brisbane's NPDES stormwater discharge permit, the San Francisco Regional MS4 Permit. This shall include construction site inspection and control programs at all construction sites, with follow-up and enforcement consistent with each Permittee's respective Enforcement Response Plan, to prevent construction	**Yes.** Because compliance with the statewide General Permit for Discharges of Storm Water Associated with Construction Activities, as well as preparation and implementation of site-specific SWPPPs for Baylands construction activities is required by law, Program EIR Mitigation Measure 4.H-1a was not carried forward into the Specific Plan EIR. Because it specifies requirements for such SWPPPs, Program EIR Mitigation Measure 4.C-1g is carried forward from the Program EIR.	**MM BIO-2c: Water Quality Protection Measures near Aquatic Sites (Program EIR Mitigation Measure 4.C-1g).** Construction and operation of proposed uses and open space areas along Visitacion Creek or adjacent to the northern lagoon edge shall include implementation of erosion control and water pollution control measures consistent with Stormwater Pollution Prevention Program (SWPPP) requirements, and implementation of an ongoing maintenance plan to ensure no reduction in water and environmental quality within the Creek and lagoon. Project applicants shall provide the City with proof that appropriate stormwater permits have been obtained pursuant to the City of Brisbane's NPDES stormwater discharge permit, the San Francisco Regional MS4 Permit. This shall include construction site inspection and control programs at all construction sites, with follow-up and enforcement

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	site discharges of pollutants and impacts on beneficial uses of receiving waters. The goal of Provision C.3 of the MS4 Permit is for the Permittee, such as the City of Brisbane, to use their planning authorities to include appropriate source control, site design, and stormwater treatment measures in new development and redevelopment projects to address both soluble and insoluble stormwater runoff pollutant discharges and prevent increases in runoff flows from new development and redevelopment projects. This goal is to be accomplished primarily through the implementation of low impact development techniques. Project applicants shall comply with local municipal requirements and the local storm water program as mandated under the Municipal Stormwater Permit, including, at minimum, the following measures: • Plan the development to fit the topography, soils, drainage pattern and natural vegetation of the Project Site. • Delineate clearing limits, easements, setbacks, sensitive or critical areas, trees, drainage courses, and buffer zones to prevent excessive or unnecessary disturbances and exposure. • Phase grading operations to reduce disturbed areas and time of exposure. • Avoid excavation and grading during wet weather. • Limit on-site construction routes and stabilize construction entrance(s) and exit(s). • Any increase in impervious surface area shall include establishment of vegetated swales, permeable pavement materials, preserve vegetation, re-plant with native vegetation and appropriate measures should be evaluated and implemented where appropriate.		consistent with each Permittee's respective Enforcement Response Plan, to prevent construction site discharges of pollutants and impacts on beneficial uses of receiving waters. The goal of Provision C.3 of the MS4 Permit is for the Permittee, such as the City of Brisbane, to use their planning authorities to include appropriate source control, site design, and stormwater treatment measures in new development and redevelopment projects to address both soluble and insoluble stormwater runoff pollutant discharges and prevent increases in runoff flows from new development and redevelopment projects. This goal is to be accomplished primarily through the implementation of low impact development techniques. Project applicants shall comply with local municipal requirements and the local stormwater program as mandated under the Municipal Stormwater Permit, including, at minimum, the following measures: • Plan the development to fit the topography, soils, drainage pattern and natural vegetation of the Baylands. • Delineate clearing limits, easements, setbacks, sensitive or critical areas, trees, drainage courses, and buffer zones to prevent excessive or unnecessary disturbances and exposure. • Phase grading operations to reduce disturbed areas and time of exposure. • Avoid excavation and grading during wet weather. • Limit on-site construction routes and stabilize construction entrance(s) and exit(s). • Any increase in impervious surface area shall include establishment of vegetated swales, permeable pavement materials, preserve vegetation, re-plant with native vegetation and

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	• Whenever practicable, native vegetation buffer areas shall be provided as part of a project to control pollutants from entering the Bay, and vegetation shall be substituted for rock riprap, concrete, or other hard surface shoreline and bank erosion control methods where appropriate and practicable. • Construct diversion dikes and drainage swales to channel runoff around the site and away from bodies of water. • Use berms and drainage ditches to divert runoff around exposed areas. • Place diversion ditches across the top of cut slopes. • No use of fertilizers or pesticides. Applicants shall prepare a maintenance program for approval by the City that includes maintenance of water quality pollution-control features, such as swales, sediment traps or other passive applications of pollution-prevention measures required as part of NPDES permitting. The maintenance program shall address the management of open space adjacent to the Brisbane lagoon and Visitacion Creek and, at minimum, shall include the following requirements, to be performed to the satisfaction of the City: • Identify the entity responsible for ongoing maintenance of the lagoon perimeter and recreational facilities within the perimeter area (e.g., property owners' association, landscape maintenance district), along with provisions permitting the City to enforce maintenance requirements and recoup costs for such enforcement. • Provide trash receptacles at appropriate locations and regular litter removal.		appropriate measures should be evaluated and implemented where appropriate. • Whenever practicable, native vegetation buffer areas shall be provided as part of a project to control pollutants from entering the Bay, and vegetation shall be substituted for rock riprap, concrete, or other hard surface shoreline and bank erosion control methods where appropriate and practicable. • Construct diversion dikes and drainage swales to channel runoff around the site and away from bodies of water. • Use berms and drainage ditches to divert runoff around exposed areas. • Place diversion ditches across the top of cut slopes. • No use of fertilizers or pesticides. Applicants shall prepare a maintenance program for approval by the City that includes maintenance of water quality pollution-control features such as swales, sediment traps or other passive applications of pollution-prevention measures required as part of NPDES permitting. The maintenance program shall address the management of open space adjacent to the Brisbane lagoon and Visitacion Creek and, at minimum, shall include the following requirements, to be performed to the satisfaction of the City: • Identify the entity responsible for ongoing maintenance of the lagoon perimeter and recreational facilities within the perimeter area (e.g., property owners' association, landscape maintenance district), along with provisions permitting the City to enforce maintenance requirements and recoup costs for such enforcement.

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	• Maintain all improvements within the lagoon perimeter in a safe and working condition. • Identify a funding mechanism to ensure site maintenance and implementation of environmental quality monitoring at the creek and lagoon as part of the open space interpretive center. Monitoring parameters shall include water quality monitoring that, at a minimum, tests the first draw of stormwater from the new rainy season, and may include, but not be limited to, vegetation monitoring and passive observation and recording of fish species present. See also Mitigation Measures 4.H-1a, 4.H-1b, and 4.H-4.		• Provide trash receptacles at appropriate locations and regular litter removal. • Maintain all improvements within the lagoon perimeter in a safe and working condition. • Identify a funding mechanism to ensure site maintenance and implementation of environmental quality monitoring at the creek and lagoon as part of the open space interpretive center. Monitoring parameters shall include water quality monitoring that, at a minimum, tests the first draw of stormwater from the new rainy season, and may include, but not be limited to vegetation monitoring, and passive observation and recording of fish species present. See also Mitigation Measure~~s 4.H-1a, 4.H-1b and~~ 4.H-4. *Reasons for revisions to this Program EIR Mitigation Measure:* • *Renumbering and adding a title to this measure is needed for consistency with all mitigation measures contained in because update analyses of hydrology this EIR.* • *Because compliance with legal requirements would result in less than significant impacts and the Program EIR Mitigation Measures 4.H-1a and 4.H-1b reflects those requirements, they were not carried forward into the Specific Plan EIR.*
Adverse effects on riparian habitat	**4.C-2a:** The applicant shall avoid or minimize adverse effects on sensitive natural communities and restored wetland mitigation areas created to comply with remediation permit requirements or any restored habitat that may have been created as part of site clean-up actions. After Project Site remediation has concluded, measures shall be implemented to avoid impacts to sensitive natural	**Yes.** Program EIR Mitigation Measure 4.C-2a, which sets requirements for protection of sensitive natural communities and restored wetland mitigation areas, is relevant to the impacts of the 2025 Specific Plan and is to be carried forward from the Program EIR.	**MM BIO-2a: Avoid or Minimize Adverse Effects on Sensitive Natural Communities and Wetland Areas (Program EIR Mitigation Measure 4.C-2a).** The applicant shall avoid or minimize adverse effects on sensitive natural communities and restored wetland mitigation areas ~~created to comply with resource agency permits or any restored habitat that may have been created as part of site clean-up actions~~.

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	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	**Carry Forward or Modify into Specific Plan EIR?**	**Mitigation Measures Carried Forward into the Baylands Development EIR**
	communities or restored habitat areas, including the installation of silt fencing, straw wattles, or other appropriate erosion and sediment control methods or devices to prevent runoff and construction debris from entering these areas. Such measures shall also be employed where pre-construction grading and post-remediation development may require work adjacent to sensitive natural communities, either prior to or after restoration of those areas occurs. Where construction activities occur in the vicinity of sensitive natural communities onsite, the following shall be implemented to ensure no loss of restored mitigation sites: Fencing shall be erected adjacent to the areas where construction is occurring to avoid unintended impacts to sensitive natural areas that occur just outside the construction area and shall be constructed in a manner that will not impede wildlife access to wetland areas. Construction workers will be educated about local resources and instructed to avoid sensitive habitats during construction, including limiting any human intrusion into natural areas. If work in the vicinity of natural communities cannot be avoided, work within these areas shall be conducted during the dry season, typically between May 1 and October 15, and shall occur under permit authority of CDFW, Corps and RWQCB pursuant to the CWA Section 404 requirements for avoidance, mitigation and monitoring. **Mitigation Measures 4.2-2b** and **4.C-2c** shall also apply if work cannot be avoided in or directly adjacent to sensitive natural areas or restored habitats created as part of site cleanup actions.		After ~~Baylands remediation~~ site grading has concluded, measures shall be implemented to avoid impacts to sensitive natural communities or restored habitat areas, including the installation of silt fencing, straw wattles, or other appropriate erosion and sediment control methods or devices to prevent runoff and construction debris from entering these areas. Such measures shall also be employed where pre-construction grading and post-remediation development requires work adjacent to sensitive natural communities, either prior to or after restoration of those areas occurs. Where construction activities occur in the vicinity of sensitive natural communities on-site, the following shall be implemented to ensure no loss of restored mitigation sites: • Fencing shall be erected adjacent to the areas where construction is occurring to avoid unintended impacts to sensitive natural areas that occur just outside the construction area and shall be constructed in a manner that will not impede wildlife access to wetland areas. Construction workers will be educated about local resources and instructed to avoid sensitive habitats during construction including limiting any human intrusion into natural areas. • If work in the vicinity of natural communities cannot be avoided, work within these areas shall be conducted during the dry season, typically between May 1 and October 15, and shall occur under permit authority of the California Department of Fish and Wildlife, the Corps of Engineers, and the ~~RWQCB~~ Regional Water Quality Control Board pursuant to the ~~CWA~~ Clean Water Act Section 404 requirements for avoidance, mitigation and monitoring. Mitigation Measures ~~4.2-2b and 4.C-2c~~ MM BIO-2b, MM

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			BIO-2c, and MM BIO-2d shall also apply if work cannot be avoided in or directly adjacent to sensitive natural areas or restored habitats ~~created as part of site cleanup actions~~. *Reasons for revisions to this Program EIR Mitigation Measure:* • *Renumbering and adding a title to this measure is needed for consistency with all mitigation measures contained in because update analyses of hydrology this EIR.* • *References to mitigation measures have been revised to refer to Specific Plan EIR mitigation measure numbers.* • *References to site remediation and clean-up activities have been deleted since they are no longer part of the project.* • *Acronyms have been replaced by the full names of regulatory agencies and federal law.*
Adverse effects on riparian habitat	**4.C-2b:** The measures described below shall be employed to avoid degradation of natural communities or sensitive natural communities by maintaining water quality and controlling erosion and sedimentation during construction as required by compliance with the National Pollutant Discharge Elimination System (NPDES) General Permit for Construction Activities and as established by **Mitigation Measures 4.H-1a and 4.H-1b** (see Section 4.H, *Hydrology and Water Quality*, of this EIR) to address impacts on water quality. In addition, measures shall include, but not be limited to, the following: • Installing silt fencing between aquatic sensitive natural communities and Project-related activities; • Locating fueling stations away from potentially jurisdictional areas and features; and	**Yes.** Mitigation Measure 4.C-2b identifies specific measures to be implemented as part of required NPDES permits and is therefore carried forward from the Program EIR.	**MM BIO-2b: Maintain Water Quality and Control Erosion and Sedimentation during Construction (Program EIR Mitigation Measure 4.C-2b).** The measures described below shall be employed to avoid degradation of natural communities or sensitive natural communities by maintaining water quality and controlling erosion and sedimentation during construction as required by compliance with the National Pollutant Discharge Elimination System (NPDES) General Permit for Construction Activities ~~and as established by **Mitigation Measures 4.H-1a and 4.H-1b** (see Section 4.H, *Hydrology and Water Quality*, of this EIR)~~ to address impacts on water quality. In addition, measures shall include, but not be limited to, the following: • Installing silt fencing between aquatic sensitive natural communities and Project-related activities;

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	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	**Carry Forward or Modify into Specific Plan EIR?**	**Mitigation Measures Carried Forward into the Baylands Development EIR**
	• Otherwise, isolating construction work areas from any identified jurisdictional features.		• Locating fueling stations away from potentially jurisdictional areas and features; and • ~~Otherwise i~~Isolating construction work areas from any identified jurisdictional features. *Reasons for revisions to this Program EIR Mitigation Measure:* • *Renumbering and adding a title to this measure is needed for consistency with all mitigation measures contained in because update analyses of hydrology this EIR.* • *Because the analysis of Hydrology and Water Quality Impact HWQ-1 concluded that compliance with NPDES General Permit for Construction Activities was required by concluded that impacts would be less than significant and did not, therefore carry mitigation measures 4.H-1a and 4.H-1b forward into this EIR.* • *A minor grammatical correction was also made, deleting the word "Otherwise."*
Adverse effects on riparian habitat	**4.C-2c:** Where disturbance to sensitive natural communities cannot be avoided, compensation shall be provided for temporary impacts and permanent loss to ensure that there is no overall loss of sensitive natural communities as a result of Project Site development. Onsite, in-kind replacement of sensitive natural communities including coastal scrub, willow scrub, tidal marsh, freshwater emergent wetlands, and lined manmade drainages that have developed bed and bank characteristics shall be a condition of development. Compensation shall be detailed on an impact-specific basis and shall include development of an onsite wetland mitigation and monitoring plan, which shall be developed prior to Project Site development or in coordination with permit applications and/or conditions. Alternately,	**Yes.** Program EIR Mitigation Measure 4.C-2c, which requires compensation for temporary impacts and permanent loss to ensure that there is no overall loss of sensitive natural communities, is relevant to the Specific Plan, and is to be carried from the Program EIR.	**MM BIO-2d: Compensatory Mitigation, Monitoring, and Reporting for Impacts to Wetlands and Non-Wetland Waters and Sensitive Natural Communities (Program EIR Mitigation Measure 4.C-2c).** Where disturbance to sensitive natural communities including jurisdictional wetlands and non-wetland waters cannot be avoided, compensation shall be provided for temporary impacts and permanent loss to ensure that there is no overall loss of sensitive natural communities as a result of ~~Project Site~~ Baylands development. Onsite, in-kind replacement of sensitive natural communities including coastal scrub, willow scrub, tidal marsh, freshwater emergent wetlands, and lined manmade drainages that have developed bed and bank characteristics shall be a condition of

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	offsite mitigation may be pursued through an approved mitigation bank, although this option may result in a higher ratio for compensation. At a minimum, such plans shall include: • Baseline information, including a summary of findings for the most recent wetland delineation conducted at the Project Site; • Anticipated habitat enhancements to be achieved through compensatory actions, including mitigation site location (onsite enhancement or offsite habitat creation) and hydrology; • Performance and success criteria for wetland creation or enhancement, including, but not limited to, the following: o At least 90 percent survival of installed plants for each of the first three years following planting. o Performance criteria for vegetation percent cover in Years 1-4 as follows: at least 10 percent cover of installed plants in Year 1; at least 20 percent cover in Year 2; at least 30 percent cover in Year 3; at least 40 percent cover in Year 4; and at least 50 percent cover in Year 5. o Performance criteria for hydrology in Years 1-5 as follows: 14 or more consecutive days of flooding, ponding, or a water table 12 inches or less below the soil surface during the growing season at a minimum frequency of three of the five monitoring years; OR establishment of a prevalence of wetland obligate plant species. o Invasive plant species that threaten the success of created or enhanced wetlands should not contribute relative cover greater		development. Compensation shall be detailed on an impact-specific basis and shall include development of an onsite Wetland Mitigation And Monitoring Plan, which shall be developed prior to ~~Project Site~~ Baylands development or in coordination with permit applications and/or conditions. Alternately, offsite mitigation may be pursued through an approved mitigation bank, although this option may result in a higher ratio for compensation. At a minimum, such plans shall include: • Baseline information, including a summary of findings for the most recent wetland delineation conducted at the Project Site; • Anticipated habitat enhancements to be achieved through compensatory actions, including mitigation site location (onsite enhancement or offsite habitat creation) and hydrology; • Performance and success criteria for wetland creation or enhancement including, but not limited to, the following: o At least 90 percent survival of installed plants for each of the first three years following planting. o Performance criteria for vegetation percent cover in Years 1-4 as follows: at least 10 percent cover of installed plants in Year 1; at least 20 percent cover in Year 2; at least 30 percent cover in Year 3; at least 40 percent cover in Year 4; and at least 50 percent cover in Year 5. o Performance criteria for hydrology in Years 1-5 as follows: 14 or more consecutive days of flooding, ponding, or a water table 12 inches or less below the soil surface during the growing season at a minimum frequency of three of the five monitoring years; OR

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	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	**Carry Forward or Modify into Specific Plan EIR?**	**Mitigation Measures Carried Forward into the Baylands Development EIR**
	than 35 percent in Year 1, 20 percent in Years 2 and 3, 15 percent in Year 4, and 10 percent in Year 5. ○ If necessary, supplemental water shall be provided by a water truck for the first two years following installation. Any supplemental water must be removed or turned off for a minimum of two consecutive years prior to the end of the monitoring period, and the wetland must meet all other criteria during this period. At the end of the five-year monitoring period, the wetland must be self-sufficient and capable of persistence without supplemental water. ○ At least 75 percent cover by hydrophytic vegetation at the end of the five-year monitoring period. In addition, wetland hydrology and hydric soils must be present and defined as follows: ▪ *Hydrophytic vegetation* – A plant community occurring in areas where the frequency and duration of inundation or soil saturation produce permanently or periodically saturated soils of sufficient duration to exert a controlling influence on the plant species present. ▪ *Wetland hydrology* – Identified by indicators such as sediment deposits, water stains on vegetation, and oxidized rhizospheres along living roots in the upper 12 inches of the soil, or satisfaction of the hydrology performance criteria listed above. ▪ *Hydric soils* – Soils that are saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions, which are often		establishment of a prevalence of wetland obligate plant species. ○ Invasive plant species that threaten the success of created or enhanced wetlands should not contribute relative cover greater than 35 percent in Year 1, 20 percent in Years 2 and 3, 15 percent in Year 4, and 10 percent in Year 5. ○ If necessary, supplemental water shall be provided by a water truck for the first two years following installation. Any supplemental water must be removed or turned off for a minimum of two consecutive years prior to the end of the monitoring period, and the wetland must meet all other criteria during this period. At the end of the five-year monitoring period, the wetland must be self-sufficient and capable of persistence without supplemental water. ○ At least 75 percent cover by hydrophytic vegetation at the end of the five-year monitoring period. In addition, wetland hydrology and hydric soils must be present and defined as follows: ▪ *Hydrophytic vegetation* – A plant community occurring in areas where the frequency and duration of inundation or soil saturation produce permanently or periodically saturated soils of sufficient duration to exert a controlling influence on the plant species present. ▪ *Wetland hydrology* – Identified by indicators such as sediment deposits, water stains on vegetation, and oxidized rhizospheres along living roots in the upper 12 inches of the soil, or satisfaction of the hydrology

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	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	**Carry Forward or Modify into Specific Plan EIR?**	**Mitigation Measures Carried Forward into the Baylands Development EIR**
	characterized by features such as redox concentrations, which form by the reduction, translocation, and/or oxidation of iron and manganese oxides. Hydric soils may lack hydric indicators for a number of reasons. In such cases, the same standard used to determine wetland hydrology when indicators are lacking can be used. • Five years after any wetland creation, a wetland delineation shall be performed to determine whether created wetlands are developing according to the success criteria outlined in the project permits. If they are not, remedial measures such as re-planting and or re-design and construction of the created wetland shall be taken to ensure that the Project's mitigation obligations are met. Monitoring and reporting requirements. If permanent and temporary impacts on jurisdictional waters cannot be compensated onsite through the restoration or enhancement of wetland features incorporated within proposed open space areas, the specific project applicant shall provide additional compensatory mitigation for these habitat losses. Potential options include the creation of additional wetland acreage onsite or the purchase and maintenance in perpetuity of offsite mitigation as approved by the City. Offsite compensatory mitigation would be required to fulfill the performance standards described above.		performance criteria listed above. ▪ *Hydric soils* – Soils that are saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions, which are often characterized by features such as redox concentrations, which form by the reduction, translocation, and/or oxidation of iron and manganese oxides. Hydric soils may lack hydric indicators for a number of reasons. In such cases, the same standard used to determine wetland hydrology when indicators are lacking can be used. • Five years after any wetland creation, a wetland delineation shall be performed to determine whether created wetlands are developing according to the success criteria outlined in the project permits. If they are not, remedial measures such as re-planting and or re-design and construction of the created wetland shall be taken to ensure that the Project's mitigation obligations are met. Monitoring and reporting requirements. If permanent and temporary impacts on jurisdictional waters cannot be compensated onsite through the restoration or enhancement of wetland features incorporated within proposed open space areas, the specific project applicant shall provide additional compensatory mitigation for these habitat losses. Potential options include the creation of additional wetland acreage onsite, the purchase of mitigation bank credits, or the purchase, implementation, and maintenance in perpetuity of offsite mitigation as approved by the City and state and federal permitting agencies. Offsite compensatory

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	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	**Carry Forward or Modify into Specific Plan EIR?**	**Mitigation Measures Carried Forward into the Baylands Development EIR**
			mitigation would be required to fulfill the performance standards described above. *Reasons for revisions to this Program EIR Mitigation Measure:* • *Renumbering and adding a title to this measure is needed for consistency with all mitigation measures contained in because update analyses of hydrology this EIR.* • *Inclusion of jurisdictional wetlands and non-wetland waters as being subject to the requirements of this measure was made explicit, consistent with the original intent of Program EIR Mitigation Measure 4.C-2c.* • *Because it was implied but not obvious in the Program EIR measure that wetlands and waters are a subset of 'sensitive natural communities," adding the phrase "including jurisdictional wetlands and non-wetland waters" clarifies the original intent of the mitigation measure.*
Restrictions on the movement of wildlife species	**4.C-4a:** Development in the Baylands shall be subject to a requirement for a Project wide Open Space Plan to be prepared by a landscape architect in coordination with a qualified habitat restoration biologist and included as a component of any Specific Plan within the Brisbane Baylands Specific Plan. The Plan shall incorporate designs to provide for wildlife movement corridors and to enhance habitat for native wildlife species. Specific requirements shall include the following: • Landscaped areas shall contain a mosaic of native habitat types that support fauna of the surrounding area, including coastal scrub, grassland, and willow scrub habitats. Tree plantings shall be limited to native species whenever possible, as these species could create	**No.** The Specific Plan implements this mitigation measure.	

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	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	**Carry Forward or Modify into Specific Plan EIR?**	**Mitigation Measures Carried Forward into the Baylands Development EIR**
	more nesting and roosting habitat for native birds and bats. • Landscape plans shall incorporate both east-west and north-south open space areas, to promote both linkages between upland habitats and San Francisco Bay and linkages between upland habitats along the Bay shoreline. • Removed trees shall be replaced at a minimum ratio of 1:1 (native trees shall be substituted for non-native trees whenever possible). The minimum ratio of 1:1 shall be met five years after planting; initial plantings may require greater than 1:1 ratio to achieve this standard. • Nest boxes for bats and cavity-nesting bird species shall be installed in passive recreational areas.		
Restrictions on the movement of wildlife species	**4.C-4b:** Development in the Baylands shall be subject to a requirement for a Marsh Wildlife and Habitat Protection Plan for the Project to be prepared as part of the specific plan process prior to approval of any site-specific development projects. The Habitat Protection Plan shall be prepared by a qualified biologist and subject to approval by the Brisbane Community Development Department and must be implemented prior to or concurrently with construction of development projects in the Baylands. The Plan shall provide for accommodating the hydrologic effects of 100 years of projected sea level rise, recognize potential negative effects of rodent population management programs, and include (but not be limited to), the following components: • To minimize the effect of night lighting on wetland habitats adjacent to Project Site development, the following shall apply in the vicinity of wetlands located north of the lagoon, development north and south of the Visitacion	**No.** The Specific Plan implements this mitigation measure.	

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	Creek channel, and any development adjacent to freshwater wetlands in the western portion of the Project Site: o Street lighting shall be provided only at intersections. o Low-intensity streetlamps and low elevation lighting poles shall be provided. o Internal silvering of the globe or external opaque reflectors shall be provided to direct light away from preserved wetland or open water habitats. o In addition, private sources of illumination around homes (**for DSP and DSP-V only**) shall also be directed and/or shaded to minimize glare into these habitats. • Residential and commercial leases within the Project Site shall prohibit building occupants from creating outdoor feeding stations for feral cats to prevent feral cat colonies from establishing and to prevent the attraction of other predatory wildlife such as red fox, raccoon, or opossums. Such restrictions shall be monitored by a property owners association which shall have the right to impose fines for violation of this requirement. • If a buffer cannot be accommodated between development and habitat areas, cyclone fencing with vinyl slats (or an equivalent screening barrier) at a minimum height of three feet for screening shall be installed outside of wetland habitat and between any preserved wetland or open water habitat and all residential or commercial development. Appropriate native vegetation shall be planted both inside and outside of the fence to provide further screening. This fencing would provide a barrier		

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	to exclude cats, dogs, and other household pets, which are not effectively deterred by buffers. • If control of rodent populations in open space areas becomes necessary, trapping and use of non-poisonous methods will be utilized. Any rodent control actions would be coordinated and documented with the County Health department. • An education program for residents shall be developed, including posted interpretive signs and informational materials regarding the sensitivity of preserved habitats and the dangers of unleashed domestic animals in this area. Such restrictions shall be monitored by a property owners association which shall have the right to impose fines for violation of the pet policy. Such information shall be provided in the vicinity of onsite marshes where public access is provided.		
Restrictions on the movement of wildlife species DSP, DSP-V, CPP, & CPP-V scenarios	**4.C-4c:** All development on the Baylands shall be required to have a no-pets policy for construction workers. All development within the Baylands that includes a residential component shall also include a pet policy that requires residents to adhere to the measures of this policy to prevent impacts on wildlife from domestic animals. The policy shall become a part of the Covenants, Conditions, and Restrictions (CC&Rs) attached to each property deed for for-sale residential properties and enforced through the homeowners' association or other entity specified in the CC&Rs and made part of leases for residential rental properties and commercial leases within the Project Site. The pet policy shall limit the number of animals per residence and require adult cats, dogs, and rabbits to be spayed or neutered. Cats and dogs shall be required to be kept inside the residences and allowed outside residences only if on a leash and	**Yes.** Program EIR Mitigation Measure 4.C-4c, which protects natural habitats from domestic pets, is relevant to the Specific Plan, and is to be carried from the Program EIR.	**MM BIO-3a: Wildlife-Safe Pet Policy during Construction and Operations (Program EIR Mitigation Measure 4.C-4a).** All development on the Baylands shall be required to have a no-pets policy for construction workers. All development within the Baylands that includes a residential component shall also include a pet policy that requires residents to adhere to the measures of this policy to prevent impacts on wildlife from domestic animals. The policy shall become a part of the Covenants, Conditions, and Restrictions (CC&Rs) attached to each property deed for for-sale residential properties and enforced through the homeowner's association or other entity specified in the CC&Rs and made part of leases for residential rental properties and commercial leases within the ~~Project Site~~ Baylands. The pet policy shall limit the number of animals per residence and require adult cats, dogs, and rabbits to be spayed or neutered. Cats and

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	under the tenant's control and supervision, except within areas specifically designed as dog parks. To provide effective predator control, feral animal trapping may be necessary.		dogs shall be required to be kept inside the residences and allowed outside residences only if on a leash and under the tenant's control and supervision, except within areas specifically designed as dog parks. To provide effective predator control, feral animal trapping may be necessary. *Reason for revising this Program EIR Mitigation Measure:* • *Renumbering and adding a title to this measure is needed for consistency with all mitigation measures contained in this EIR.*
Restrictions on the movement of wildlife species	**4.C-4d:** During design of any building greater than 100 feet tall, the applicant and architect shall consult with a qualified biologist experienced building/lighting design issues (as approved by the City of Brisbane Planning Department) to identify lighting related measures to minimize the effects of the building's lighting on birds. Such measures, which may include the following and/or other measures, shall be incorporated into the building's design and operation. • Use strobe or flashing lights in place of continuously burning lights for obstruction lighting. Use flashing white lights rather than continuous light, red light, or rotating beams. • Install shields onto light sources not necessary for air traffic to direct light towards the ground. • Extinguish all exterior lighting (i.e., rooftop floods, perimeter spots) not required for public safety. • When interior or exterior lights must be left on at night, the operator of the buildings shall examine and adopt alternatives to bright, all-night, floor-wide lighting, which may include: o Installing motion-sensitive lighting. o Using desk lamps and task lighting.	**Yes.** Program EIR Mitigation Measure 4.C-4d, which sets nighttime lighting requirements to reduce bird strikes, is relevant to the 2025 Specific Plan, and is to be carried from the Program EIR.	**MM BIO-3d: Use of Wildlife-friendly Lighting (Program EIR Mitigation Measure 4.C-4d).** During design of any building greater than 100 feet tall, the applicant and architect shall consult with a qualified biologist experienced building/lighting design issues (as approved by the City of Brisbane Planning Department) to identify lighting related measures to minimize the effects of the building's lighting on birds. Such measures, which may include the following and/or other measures, shall be incorporated into the building's design and operation. • Use strobe or flashing lights in place of continuously burning lights for obstruction lighting. Use flashing white lights rather than continuous light, red light, or rotating beams. • Install shields onto light sources not necessary for air traffic to direct light towards the ground. • Extinguish all exterior lighting (i.e., rooftop floods, perimeter spots) not required for public safety. • When interior or exterior lights must be left on at night, the operator of the buildings shall examine and adopt alternatives to bright, all-night, floor-wide lighting, which may include:

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	○ Reprogramming timers. ○ Use of lower-intensity lighting. • Windows or window treatments that reduce transmission of light out of the building will be implemented to the extent feasible. • Educational materials will be provided to building occupants encouraging them to minimize light transmission from windows, especially during peak spring and fall migratory periods, by turning off unnecessary lighting and/or closing drapes and blinds at night. A report of the lighting alternatives considered and adopted shall be provided to the City of Brisbane Planning Department for review and approval prior to construction. The City of Brisbane Planning Department shall ensure that lighting-related measures to reduce the risk of bird collisions have been incorporated into the design of such buildings to the extent practicable.		○ Installing motion-sensitive lighting. ○ Using desk lamps and task lighting. ○ Reprogramming timers. ○ Use of lower-intensity lighting. ○ Windows or window treatments that reduce transmission of light out of the building will be implemented to the extent feasible. ○ Educational materials will be provided to building occupants encouraging them to minimize light transmission from windows, especially during peak spring and fall migratory periods, by turning off unnecessary lighting and/or closing drapes and blinds at night. ○ A report of the lighting alternatives considered and adopted shall be provided to the City of Brisbane Planning Department for review and approval prior to construction. The City of Brisbane Planning Department shall ensure that lighting-related measures to reduce the risk of bird collisions have been incorporated into the design of such buildings to the extent practicable. *Reason for revising this Program EIR Mitigation Measure:* • *Renumbering and adding a title to this measure is needed for consistency with all mitigation measures contained in this EIR.*
Restrictions on the movement of wildlife species	**4.C-4e:** During design of any building greater than 100 feet tall, the applicant and architect shall consult with a qualified biologist experienced with urban building bird strikes design issues (as approved by the City of Brisbane Planning Department) to identify measures related to the external appearance of the building to minimize the risk of bird strikes. Such measures, which may include the following and/or	**Yes.** Program EIR Mitigation Measure 4.C-4d, which sets building design requirements to reduce bird strikes, is relevant to the 2025 Specific Plan, and is to be carried from the Program EIR.	**MM BIO-3e: Bird-Safe Building Design (Program EIR Mitigation Measure 4.C-4e).** During design of any building greater than 100 feet tall, the applicant and architect shall consult with a qualified biologist experienced with urban building bird strikes design issues (as approved by the City of Brisbane Planning Department) to identify measures related to the external appearance of the building to minimize the

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	other measures, shall reflect most current practice in in bird strike protection, and be incorporated into the building's design: • Treat all windows to decrease reflectivity, including use of non-reflective tinted glass. • Use window films to make windows visible to birds from the outside. • Use of outdoor lighting and colors of lighting that increase visibility of buildings to birds without substantially increasing energy consumption or decreasing public safety. • Use external surfaces/designs that break up reflective surfaces. • Place bird attractants, such as bird feeders and baths, at least three feet and preferably 30 feet or more from windows in order to reduce collision mortality. A report of the design measures considered and adopted shall be provided to the City of Brisbane Planning Department for review and approval prior to construction. The City of Brisbane Planning Department shall ensure that building design related measures to reduce the risk of bird collisions have been incorporated to the extent practicable.		risk of bird strikes. Such measures, which may include the following and/or other measures, shall be incorporated into the building's design: • Use non-reflective tinted glass. • Use window films to make windows visible to birds from the outside. • Use external surfaces/designs that break up reflective surfaces. • Place bird attractants, such as bird feeders and baths, at least three feet and preferably 30 feet or more from windows in order to reduce collision mortality. A report of the design measures considered and adopted shall be provided to the City of Brisbane Planning Department for review and approval prior to construction. The City of Brisbane Planning Department shall ensure that building design related measures to reduce the risk of bird collisions have been incorporated to the extent practicable. *Reason for revising this Program EIR Mitigation Measure:* • *Renumbering and adding a title to this measure is needed for consistency with all mitigation measures contained in because update analyses of hydrology this EIR.*

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	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	**Carry Forward or Modify into Specific Plan EIR?**	**Mitigation Measures Carried Forward into the Baylands Development EIR**
Restrictions on the movement of wildlife species	**4.C-4f:** Prior to tree removal, trimming of trees or shrubs or soil disturbance for site grading, a survey of suitable nesting habitat shall be conducted by an avian biologist familiar with Bay Area species and habitats to map the location of vegetation that could support avian species. If ground-disturbing activities or vegetation removal are proposed during the breeding bird season (January 1 through September 15), to avoid direct losses of nests, eggs, and nestlings and indirect impacts on avian breeding success, a qualified avian biologist shall survey active sites for nesting raptors and passerine birds not more than 14 days prior to the ground-disturbing activity or vegetation removal. Surveys shall include all trees in line-of-sight and within 500 feet of construction for raptors, and all vegetation (including bare ground within 250 feet) for all other species. If active nests are found, tree removal or tree trimming and construction activities, including soil disturbance, construction noise, increased human presence, would be halted and the nest would be monitored by a qualified biologist who shall verify when the nestlings have fledged and left the nest.	**Yes.** To streamline the EIR and clarify nesting bird requirements, this measure was combined with PEIR Mitigation Measure 4.C-1d, which included similar survey requirements, buffer distances, and biological monitoring protocols.	
Restrictions on the movement of wildlife species	**4.C-4g:** Applicants for site specific development projects pursuant to an approved specific plan within the Project Site shall take the following measures to avoid direct mortality of roosting special-status bats and disturbance of maternity roosts or winter hibernacula: • A bat biologist familiar with Bay Area species shall conduct surveys of all potential bat habitat, including areas suitable for maternity roosts and/or winter hibernacula within a site proposed for development prior to initiation of construction activities, including initial grading. Surveys shall be conducted within one year prior	**Yes.** Program EIR Mitigation Measure 4.C-4g, which protects against direct mortality of roosting special-status bats and disturbance of maternity roosts or winter hibernacula, is relevant to the 2025 Specific Plan, and is to be carried from the Program EIR.	**MM BIO-1e: Special-Status Bat Roost Protection (Program EIR Mitigation Measure 4.C-4g).** Applicants for demolition, grading or site-specific development projects pursuant to an approved specific plan within the Baylands shall take the following measures to avoid direct mortality of roosting special-status bats and disturbance of maternity roosts or winter hibernacula: • A bat biologist familiar with Bay Area species shall conduct surveys of all potential bat habitat, including areas suitable for maternity roosts and/or winter hibernacula within a site proposed for development prior to initiation of

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	**Carry Forward or Modify into Specific Plan EIR?**	**Mitigation Measures Carried Forward into the Baylands Development EIR**
	to construction to capture current bat habitats at the site, as presence of bats could vary yearly, and survey results several years before impacts occur could be inaccurate. Potentially suitable habitat shall be located visually. Bat emergence counts shall be made at dusk as the bats depart from any suitable habitat. In addition, an acoustic detector shall be used to determine any areas of bat activity. At least four nighttime emergence counts shall be undertaken on nights that are warm enough for bats to be active. The bat biologist shall determine the type of each active roost (i.e., maternity, winter hibernacula, day or night). • Removal or trimming of trees or demolition of buildings showing evidence of bat activity shall occur during the period least likely to affect the bats as determined by a qualified bat biologist (generally between February 15 and October 15 for winter hibernacula and between August 15 and April 15 for maternity roosts). If active day or night (non-maternity) roosts are found, the bat biologist shall take action to allow individual bats to depart prior to tree removal or building demolition. During construction, a no-disturbance buffer shall be created around active bat roosts being used for maternity or hibernation purposes at a distance to be determined in consultation with CDFW. Bat roosts initiated during construction are presumed to be unaffected, and no buffer is necessary.		construction activities, including initial grading. Surveys shall be conducted within one year prior to construction to capture current bat habitats at the site, as presence of bats could vary yearly, and survey results several years before impacts occur could be inaccurate. Potentially suitable habitat shall be located visually. Bat emergence counts shall be made at dusk as the bats depart from any suitable habitat. In addition, an acoustic detector shall be used to determine any areas of bat activity. At least four nighttime emergence counts shall be undertaken on nights that are warm enough for bats to be active, or as otherwise deemed adequate by a qualified bat biologist to determine species absence. The bat biologist shall determine the type of each active roost (i.e., maternity, winter hibernacula, day or night). • Removal or trimming of trees or demolition of buildings showing evidence of bat activity shall occur during the period least likely to affect the bats as determined by a qualified bat biologist (generally between February 15 and October 15 for maternity roosts ~~winter hibernacula~~ and between August 15 and April 15 for ~~maternity roosts~~ winter hibernacula). If active day or night (non-maternity) roosts are found, the bat biologist shall take action to allow individual bats to depart prior to tree removal or building demolition. • The following steps shall be taken during the removal of active or suspected bat roosts: 1. The qualified biologist shall be present during tree and structure disturbance or removal if active non-maternity or hibernation bat roosts or potential roosting habitat are present. Trees and structures

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	Carry Forward or Modify into Specific Plan EIR?	Mitigation Measures Carried Forward into the Baylands Development EIR
			with active non-maternity or hibernation roosts or potential habitat shall be disturbed or removed only under clear weather conditions when precipitation is not forecast for three days and when nighttime temperatures are at least 50°F, and when wind speeds are less than 15 mph. 2. Trimming or removal of trees with active (non-maternity or hibernation) or potentially active roost sites shall follow a two-step removal process: 3. On the first day of tree removal and under supervision of the qualified biologist, branches and limbs not containing cavities or fissures in which bats could roost, shall be cut only using hand tools (e.g., chainsaws). 4. On the following day and under the supervision of a qualified biologist, the remainder of the tree may be removed, either using hand tools or other equipment (e.g., excavator or backhoe). 5. All felled trees shall remain on the ground for at least 24 hours prior to chipping, off-site removal, or other processing to allow any bats to escape, or be inspected once felled by the qualified biologist to ensure no bats remain within the tree and/or branches. 6. Disturbance to or removal of structures containing or suspected to contain active bat roosts (non-maternity or hibernation) or potentially active bat roosts shall be done in the evening and after bats have emerged from the roost to forage. Structures shall be partially dismantled to significantly change the roost conditions, causing bats to abandon and not return to the roost.

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	Carry Forward or Modify into Specific Plan EIR?	Mitigation Measures Carried Forward into the Baylands Development EIR
			Removal will be completed the subsequent day. 7. During construction, a no-disturbance buffer shall be created around active bat roosts being used for maternity or hibernation purposes at a distance to be determined in coordination with the CDFW. *Reasons for revising this Program EIR Mitigation Measure:* • *Renumbering and adding a title to this measure is needed for consistency with all mitigation measures contained in because update analyses of hydrology this EIR.* • *The measure corrects an error in the timing of bat maternity roosting and winter hibernacula.*

e. Cultural Resources and Tribal Cultural Resources

Table 4.21-4: Program EIR Cultural Resources and Tribal Cultural Resources Mitigation Measures

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	Carry Forward or Modify into Specific Plan EIR?	Mitigation Measures Carried Forward into the Baylands Development EIR
Roundhouse Building	**Mitigation Measure 4.D-1a:** Within 90 days of Specific Plan adoption or prior to the issuance of the first grading or building permit within the Project Site (whichever occurs first), the property owner shall prepare and implement a stabilization plan subject to review and approval by the Brisbane Planning Department to protect and stabilize the Roundhouse from further deterioration and future vandalism. Such a plan may include, but is not limited to, additional protective fencing, signage, installation of temporary roof coverings to protect the interior from rainwater intrusion and covering of all window and door openings with plywood. In preparation of the stabilization plan, the property owner shall use the National Park Service's *Preservation Brief #31, Mothballing Historic Buildings*. Within 90 days of the issuance of any planning or development approval (e.g., site remediation, grading, site development plan, building permit) encompassing the area of the historic Roundhouse, the property owner shall also submit a rehabilitation plan for the historic Roundhouse to the City for review and approval by the Brisbane Planning Commission. Implementation of the rehabilitation plan shall be completed prior to the first occupancy permit for the area subject to the planning or development permit approved encompassing the area of the historic Roundhouse. The rehabilitation plan shall be consistent with the performance standards contained in the following documents:	**No.** Prepared along with the draft Specific Plan in 2025 was a detailed plan for restoration and adaptive reuse of the historic Roundhouse, which implements Program EIR Mitigation Measure 4.D-1a. As a result, Program EIR Mitigation Measure 4.D-1a no longer applies.	

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	**Carry Forward or Modify into Specific Plan EIR?**	**Mitigation Measures Carried Forward into the Baylands Development EIR**
	i. The Secretary of the Interior's Standards for Rehabilitation. Such standards call for the retention of significant, character-defining features of the building while finding a new use for the structure that is compatible with its historic character; ii. The National Park Service's *Preservation Brief #17, Identifying the Visual Aspects of Historic Buildings as an Aid to Preserving Their Architectural Character*; and iii. The National Park Service's *Preservation Brief #18, Rehabilitating Interiors in Historic Buildings – Identifying and Preserving Character-Defining Elements*. To ensure compliance with the Secretary of the Interior's Standards for Rehabilitation, rehabilitation plans shall also be reviewed by a qualified consulting architectural historian who meets the Secretary of the Interior's Standards for Architectural History prior to action by the Planning Commission. The rehabilitation plans shall meet a minimum of 7 out of 10 of the Standards.		
Roundhouse, Machinery and Equipment Buildings	**Mitigation Measure 4.D-1b:** All Project Site development within 50 feet of the Roundhouse or the Machinery & Equipment building be designed to ensure their architectural compatibility with the historic Roundhouse, and to ensure that new buildings do not overwhelm or unnecessarily contrast with these historic buildings. To this end, all development projects shall incorporate a minimum 50-foot structural setback and appropriate heights, volumes, and materials for any proposed new buildings in the immediate vicinity to ensure compatibility with the Roundhouse and the Machinery & Equipment building. Appropriate heights of new construction adjacent to the Roundhouse would be the same as (about 25 feet),	**Yes.** This measure's design requirements are needed to address impacts of the 2025 Specific Plan in relation to the Roundhouse but require the modifications described to the right.	**MM CUL-1a Design Guidelines (Program EIR Mitigation Measure 4.D-1b).** All ~~Project Site~~ Baylands development within 50 feet of the Roundhouse or the Machinery & Equipment building shall be designed to ensure their architectural compatibility with the historic Roundhouse, and to ensure that new buildings do not overwhelm or unnecessarily contrast with these historic buildings. To this end, the reconstructed Roundhouse shall be located no closer than 30 feet from the park boundary, and all development projects shall incorporate a minimum 50-foot structural setback and appropriate heights, volumes, and materials for any proposed new buildings in the immediate

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	**Carry Forward or Modify into Specific Plan EIR?**	**Mitigation Measures Carried Forward into the Baylands Development EIR**
	or slightly greater than (i.e., up to 15 feet greater than), the existing height of the building. Appropriate heights of new construction adjacent to the Machinery & Equipment building would be the same as (about 40 feet) or slightly greater than (up to 10 feet greater than), the existing height of the building. Appropriate materials for new construction in the immediate vicinity of either building would be brick cladding and/or cementitious materials painted a similar dark red color, as well as Spanish tile roof cladding. Appropriate volumes for new development that would face the Roundhouse should mirror the curve of the existing structure. Appropriate volumes for new development in the vicinity of the Machinery & Equipment building would be rectilinear in massing. All development projects within 50 feet of the Roundhouse or the Machinery & Equipment building shall be subject to City design permit review and approval prior to development.		vicinity to ensure compatibility with the Roundhouse ~~and the Machinery & Equipment~~ building. Appropriate heights of new construction adjacent to the Roundhouse would be the same as (about 25 feet), or slightly greater than (i.e., up to 15 feet greater than), the existing height of the building. ~~Appropriate heights of new construction adjacent to the Machinery & Equipment building would be the same as (about 40 feet) or slightly greater than (up to 10 feet greater than), the existing height of the building.~~ Appropriate materials for new construction in the immediate vicinity of either building would be brick ~~and/or cementitious materials painted a similar dark red color, as well as Spanish tile roof~~ cladding. Appropriate volumes for new development that would face the Roundhouse should mirror the curve of the existing structure. ~~Appropriate volumes for new development in the vicinity of the Machinery & Equipment building would be rectilinear in massing.~~ All <u>non-residential</u> development projects within 50 feet of the Roundhouse ~~or the Machinery & Equipment building~~ shall be subject to City design permit review and approval prior to development <u>to ensure consistency with the guidelines</u>. *Reason for revisions to this Program EIR Mitigation Measure:* • *Renumbering and adding a title to this measure is needed for consistency with all mitigation measures contained in this EIR.* • *The term "Project site" encompasses an area larger than the Baylands. Deletion of this term focuses mitigation requirements on the physical area affected by the impact consistent with the original intent of Program EIR Mitigation Measure 4.A-1b.*

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	Carry Forward or Modify into Specific Plan EIR?	Mitigation Measures Carried Forward into the Baylands Development EIR
			• *Since the project has been changed to propose dismantling and reconstruction of the Roundhouse, placement of the reconstructed building no closer than 30 feet from the park boundary would accomplish the objective of this measure.* • *Because of changes in state law, residential development cannot be subject to discretionary design review permits.* • *The Specific Plan implements this Program EIR mitigation measure in relation to the Machinery & Equipment building, reducing impacts on that building to less than significant.*
Previously Unidentified Archaeological Resources	**Mitigation Measure 4.D-2:** If any previously unidentified archaeological resources are discovered during ground-disturbing activities associated with development on the Baylands, all work within 100 feet of the resources shall be halted. The City, in consultation with a City-approved qualified consulting archaeologist, shall assess the significance of the find according to CEQA Guidelines Section 15064.5. Prehistoric materials subject to this measure might include obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or toolmaking debris; culturally darkened soil ("midden") containing heat-affected rocks, artifacts, or shellfish remains; stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs); and battered stone tools, such as hammerstones and pitted stones. Historic-era materials subject to this measure might include in-situ (in place) stone, concrete, or adobe footings and walls; filled wells or privies; and in-situ deposits of metal, glass, and/or ceramic refuse. If any find is determined to be a historical resource or a unique archaeological resource, the City and the	**Yes.** Program EIR Mitigation Measure 4.D-2 is relevant to proposed Baylands development and is to be carried forward into the Baylands Specific Plan EIR.	**MM CUL-2a: Inadvertent Discovery of Cultural Resources (Program EIR Mitigation Measure 4.D-2).** If any previously unidentified archaeological resources are discovered during ground-disturbing activities associated with development on the Baylands, all work within 100 feet of the resources shall be halted. The City, in consultation with a City-approved qualified consulting archaeologist, shall assess the significance of the find according to CEQA Guidelines Section 15064.5. Prehistoric materials subject to this measure might include obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or toolmaking debris; culturally darkened soil ("midden") containing heat-affected rocks, artifacts, or shellfish remains; stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs); and battered stone tools, such as hammerstones and pitted stones. Historic-era materials subject to this measure might include in-situ (in place) stone, concrete, or adobe footings and walls; filled wells or privies;

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	**Carry Forward or Modify into Specific Plan EIR?**	**Mitigation Measures Carried Forward into the Baylands Development EIR**
	consulting archaeologist shall meet to determine the appropriate avoidance measures or other appropriate mitigation. The City shall make the final determination. All archaeological resources recovered shall be subject to scientific analysis, professional museum curation, and documentation according to current professional standards. Preservation in place, i.e., avoidance, is the preferred method of mitigation for impacts to cultural resources and shall be required unless there are other equally effective methods. Preservation in place would include planning construction to avoid archaeological sites; deeding archaeological sites into a conservation easement, park, or green space; or capping/covering archaeological sites with a layer of soil before building. Other methods to be considered shall include archeological testing, archeological monitoring, and/or an archeological data recovery program that would include sample excavation, artifact collection, site documentation, and historical research. All archaeological work shall be completed in accordance with an Archaeological Resources Treatment Plan prepared by the City-approved qualifying archaeological consultant. Work may commence upon completion of treatment, as approved by the City.		and in-situ deposits of metal, glass, and/or ceramic refuse. If any find is determined to be a historical resource or a unique archaeological resource, the City and the consulting archaeologist shall meet to determine the appropriate avoidance measures or other appropriate mitigation. The City shall make the final determination. All archaeological resources recovered shall be subject to scientific analysis, professional museum curation, and documentation according to current professional standards. Preservation in place, i.e., avoidance, is the preferred method of mitigation for impacts to cultural resources and shall be required unless there are other equally effective methods. Preservation in place would include planning construction to avoid archaeological sites; deeding archaeological sites into a conservation easement, park, or green space; or capping/covering archaeological sites with a layer of soil before building. Other methods to be considered shall include archeological testing, archeological monitoring, and/or an archeological data recovery program that would include sample excavation, artifact collection, site documentation, and historical research. All archaeological work shall be completed in accordance with an Archaeological Resources Treatment Plan prepared by the City-approved qualifying archaeological consultant. Work may commence upon completion of treatment, as approved by the City. *Reason for revisions to this Program EIR Mitigation Measure:*

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	**Carry Forward or Modify into Specific Plan EIR?**	**Mitigation Measures Carried Forward into the Baylands Development EIR**
			• *Renumbering and adding a title to this measure is needed for consistency with all mitigation measures contained in this EIR.*
Disturbance of Human Remains	**Mitigation Measure 4.D-4:** If human skeletal remains are uncovered during Project construction, work shall immediately be halted within 100 feet of the find and the San Mateo County Coroner shall be contacted to evaluate the remains as required by the protocols set forth in Section 15064.5(e)(1) of the CEQA Guidelines. If the County Coroner determines that the remains are Native American, the coroner has 24 hours to contact the Native American Heritage Commission (NAHC), in accordance with Health and Safety Code Section 7050.5, Subdivision (c), and Public Resources Code Section 5097.98 (as amended by Assembly Bill 2641). The NAHC will then identify the person(s) thought to be the Most Likely Descendent (MLD) of the deceased Native American, who will then help determine what course of action should be taken in dealing with the remains. In accordance with Public Resources Code Section 5097.98, the specific project applicant/landowner shall ensure that, according to generally accepted cultural or archaeological standards or practices, the immediate vicinity where the Native American human remains are located is not damaged or disturbed by further development activity until the landowner has discussed and conferred, as prescribed in Public Resources Code Section 5097.98, with the MLD regarding their recommendations, if applicable, taking into account the possibility of multiple human remains.	**No.** Compliance with Health and Safety Code Sections 7050.5 and 7052.5, as well as Public Resources Code Section 5097.98 would protect any previously unidentified human remains, including those interred outside of formal cemeteries. Compliance with applicable legal requirements would result in a less than significant impact. Thus, Program EIR Mitigation Measure 4.D-4, which requires compliance with those requirements, is no longer necessary.	

f. Transportation

Table 4.21-5: Program EIR Transportation Mitigation Measures

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	**Carry Forward or Modify into Specific Plan EIR?**	**Mitigation Measures Carried Forward or Modified into the Baylands Specific Plan EIR**
Increased traffic and resulting level of service at intersections	**4.N-1a, 4.N-3a:** Outlines specific physical improvements to be constructed to improve levels of service at the intersection of Bayshore Boulevard and Geneva Avenue. **4.N-1b., 4.N-3b:** Outlines specific physical improvements to be constructed to improve level of service at the intersection of Bayshore Boulevard and Old County Road. **4.N-1c:** Outlines specific physical improvements to be constructed to improve level of service at the Alana Way/Beatty Avenue/US 101 Southbound Ramps intersection. **4.N-1d:** Outlines specific physical improvements to be constructed to improve level of service at the Alana Way/Harney Way/Thomas Mellon Drive intersection. **4.N-1e:** Outlines specific physical improvements to be constructed to improve level of service at the intersection of Tunnel Avenue and Bayshore Boulevard. **4.N-3c:** Outlines specific physical improvements to be constructed to improve level of service at the intersection of Sierra Point Parkway and the US 101 freeway ramps. **4.N-3d:** Outlines specific physical improvements to be constructed to improve level of service at the intersection of Lagoon Way and Tunnel Avenue. **4.N-3e:** Outlines specific physical improvements to be constructed to improve level of service at	**No.** Subsequent to certification of the Program EIR, the adoption of SB 743 eliminated traffic delay as a significant impact from CEQA. While SB 743 permits implementation of level of service and other types of traffic delay standards as part of a City's General Plan, level of service standards for Bayshore Boulevard and Geneva Avenue were removed from the Brisbane General Plan in 2020 with the adoption of General Plan Amendment GP-1-19, which called for preparation of a mobility plan for Bayshore Boulevard. The proposed Bayshore Boulevard Mobility Plan implements GP-1-19 and replaces the requirements for physical improvements to Bayshore Boulevard incorporated into Program EIR Mitigation Measures.	

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	**Carry Forward or Modify into Specific Plan EIR?**	**Mitigation Measures Carried Forward or Modified into the Baylands Specific Plan EIR**
	the Lagoon Way/Sierra Point Parkway intersection. **4.N-3f:** Provides for coordination with the San Francisco County Transportation Authority, San Francisco Municipal Transportation Authority, and Caltrans in the design of future US 101 SB Ramp improvements as part of the Geneva Avenue extension project. Also specifies timing for completion of the extension of Geneva Avenue from Bayshore Boulevard to the US 101 freeway and reconfiguration of the US 101 Candlestick interchange in relation to an LOS standard. **4.N-3g:** Outlines specific physical improvements to be constructed to improve level of service at the Carter Street/Geneva Avenue intersection in San Francisco. **4.N-3h:** Outlines specific physical improvements to be constructed to improve level of service at the E. Market Street/Orange Street intersection.		
Increased traffic and resulting level of service due to special events at an onsite arena	**4.N-1f, 4.N-5:** Requires preparation and implementation of a Transportation Management Plan to address traffic from an arena within the Project Site.	**No.** Development of an arena within the Baylands is no longer proposed. In addition, increased traffic and resulting level of service at intersections is no longer considered to be a significant environmental effect.	
Increased traffic and resulting level of service; Emergency response	**4.N-1g:** Outlines requirements for spacing of intersections along the Geneva Avenue extension through the Baylands.	**Yes. In addition to increased traffic congestion, this measure also addresses adverse emergency response impacts that would result from traffic at an intersection backing up into another intersection along the Geneva Avenue extension.**	**MM TRA-3b: Closely Spaced Intersections on Geneva Avenue (Program EIR Mitigation Measure 4.N-1g).** Approval of any tentative map providing for spacing of less than 1,200 feet between full-access intersections along the Geneva Avenue extension shall require that the interactions of green and red signal timing at any one intersection along the Geneva Avenue extension shall not affect operations at any other intersection along the extension, by

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	Carry Forward or Modify into Specific Plan EIR?	Mitigation Measures Carried Forward or Modified into the Baylands Specific Plan EIR
			backing traffic waiting for a green signal at one intersection along the Geneva Avenue extension into another intersection along the extension. Should full-access intersections along the Geneva Avenue extension with spacing of less than 1,200 feet be proposed, a microsimulation of all proposed intersections along the extension (e.g., Synchro, VISSUM) shall be undertaken to analyze interactions of green and red signal timing and demonstrate that operations at any one intersection along the Geneva Avenue extension would not affect operations at any other intersection along the extension. *Reason for revisions to this Program EIR Mitigation Measure:* *Renumbering and adding a title to this measure is needed for consistency with all mitigation measures contained in this EIR.*
Increased traffic and resulting access to non-Recology lands east of the Caltrain	**4.N-1h:** Requires access to be provided via public street(s) to existing uses east of Caltrain at all times prior to the completion of the proposed Geneva Avenue extension.	**No.** The current grading plan indicates that access is to be provided via public street(s) to existing uses east of Caltrain, implementing this mitigation measure.	
Increased traffic on the regional roadways and the US 101 freeway mainline	**4.N-4:** Provides for fair share funding from Baylands development for cumulative regional roadway system impacts, including freeway segment impacts	**No.** Because increased traffic and resulting level of service are no longer considered to be significant environmental effects, Program EIR Mitigation Measure 4.N-4 was not carried forward from the Program EIR.	
Increased transit ridership and impacts on Muni operations	**4.N-7:** Prior to issuance of the first building occupancy permit for new development other than improvement of relocation of an existing use within the Project Site, the developer(s) of Project Site land uses shall provide a fair-share contribution to the San Francisco Municipal Transportation Agency (SFMTA) to cover Baylands development's share of the capital	**No.** Because increased traffic and resulting level of service are no longer considered to be significant environmental effects, Program EIR Mitigation Measure 4.N-4 was not carried forward from the Program EIR.	

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	**Carry Forward or Modify into Specific Plan EIR?**	**Mitigation Measures Carried Forward or Modified into the Baylands Specific Plan EIR**
	costs for providing additional transit service needed to achieve San Francisco Muni's capacity threshold of 85 percent along the Northeast and Southeast screenlines. In addition, provision shall be made for implementation of shuttle service between the Project Site and the Balboa Park BART Station in the Geneva Avenue corridor.		
Adequacy of transit service (areas of site more than 1/3 miles from Caltrain and Muni T-line stations)	**4.N-9:** Prior to issuance of the first building occupancy permit for any new development other than improvement or relocation of an existing use within the Project Site, a shuttle bus service plan shall be developed and approved by the City that provides convenient transit service (maximum 15 minute headways in the peak hour) between Project Site land uses within the Baylands located more than one-third mile from the Bayshore Caltrain Station or Sunnydale Muni Station to those stations. Shuttle service shall be implemented as described in the plan prior to occupancy of any qualifying Project Site land use other than improvement or relocation of an existing use within the Project Site. This requirement shall also be included in any specific plan approved for development within the Project Site.	**No.** Because Program EIR Mitigation Measure 4.N-9 has been implemented by the Specific Plan, it is not carried forward from the Program EIR.	
Pedestrian circulation	**4.N-10:** Prior to issuance of the first building occupancy permit for new development other than improvement or relocation of an existing use within the Project Site, at a minimum, the following measures shall be implemented to improve pedestrian accessibility: • The Bay Trail in the northern portion of the Project Site shall be realigned to provide a more direct route to the east side of US 101,	**No.** The Specific Plan implements this mitigation measure within the Specific Plan area but does not provide adequate connections to pedestrian systems adjacent to the Specific Plan area. Since Program EIR Mitigation Measure 4.N-10 would not address these off-site connections, it is not carried forward from the Program EIR and new mitigation measures are provided in the Specific Plan EIR.	

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	**Carry Forward or Modify into Specific Plan EIR?**	**Mitigation Measures Carried Forward or Modified into the Baylands Specific Plan EIR**
	following Geneva Avenue through the US 101 interchange. • Sidewalks or equivalent pedestrian paths shall be provided to safely permit pedestrian access to all uses within the Project Site intended for human occupancy and use, including provision of through pedestrian routes to minimize pedestrian travel distances between uses. • Specific provisions shall be made for safe pedestrian movement within and through parking areas to access buildings • Sidewalks shall be provided along the Project Site frontage on Bayshore Boulevard between Sunnydale Avenue and Tunnel Avenue. These minimum requirements, along with the equivalent of the facilities shown in Table 4.N-8, shall also be included within each specific plan approved within the Project Site.		

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	**Carry Forward or Modify into Specific Plan EIR?**	**Mitigation Measures Carried Forward or Modified into the Baylands Specific Plan EIR**
Bicycle circulation	**4.N-11:** Prior to issuance of the first building occupancy permit for new development other than improvement or relocation of an existing use within the Project Site, roadways and trails shall provide for safe accessibility for bicycles to buildings and recreational areas throughout the Project Site, including connections to offsite bicycle routes and trails. In addition, Project Site land uses shall provide bicycle parking in appropriate areas (i.e., where they will get the most use, where security is maximized, and where pedestrian circulation is minimally affected by their presence). The minimum standards contained in this mitigation measure, along with the equivalent bicycle access as that shown in Table 4.N-7, shall be included in any specific plan approved for development within the Project Site. In addition, details of Project Site development-provided bicycle parking spaces (number and location) shall be determined at the time when site-specific development projects are proposed pursuant to the adopted Specific Plan, and shall adhere to the following guidelines which shall also be included in any specific plan adopted for development within the Project Site: • Bicycle parking shall be placed within 50 feet of building and facility entrances, where it can be well-lit, clearly visible, and out of the primary travel path of pedestrians. Retail shopping centers and supermarkets shall include one Class I rack (covered bicycle locker for long-term parking) per 30 employees, and one Class II rack (able to secure both the frame and at least one	**No.** The Specific Plan implements this mitigation measure on-site but does not address adequate connections to bicycle systems adjacent to the Specific Plan area. It is therefore not carried forward from the Program EIR and new mitigation measures are provided in the Specific Plan EIR.	

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	**Carry Forward or Modify into Specific Plan EIR?**	**Mitigation Measures Carried Forward or Modified into the Baylands Specific Plan EIR**
	wheel of a bicycle for short-term parking) per 6,000 square feet of retail space. • Parks and recreational fields normally shall include one Class I rack per 30 employees and one Class II rack per 9 users (during peak daylight times of peak season). Transit centers normally shall include individual parking spaces equal to 2 percent of daily boardings (75 percent Class I and 25 percent Class II).		
Temporary traffic impacts during construction	**4.N-12:** In conjunction with all construction permits, site-specific development projects shall develop, submit for City review and approval, and implement Construction Management Plans that specify measures that would reduce impacts on motor vehicle, bicycle, pedestrian, and transit circulation. The Construction Management Plans shall include, but not necessarily be limited to, the following: • Location of construction staging areas for materials, equipment, and vehicles. • Notification procedures for adjacent property owners and public safety personnel regarding when major deliveries, detours, and lane closures will occur. • Identification of haul routes for movement of construction vehicles that would minimize impacts on vehicular and pedestrian traffic, circulation and safety; and provision for monitoring surface streets used for haul routes so that any damage and debris attributable to the haul trucks can be identified and corrected by the project applicant.	**Yes.** Mitigation Measure 4.N-12 is relevant to the 2025 Specific Plan and is to be carried forward from the Program EIR.	**MM TRA-3a: Construction Management Plans (Program EIR Mitigation Measure 4.N-12).** In conjunction with all construction permits, site-specific development and infrastructure projects subject to City of Brisbane approval shall develop, submit for City review and approval, and implement Construction Management Plans that specify measures that would reduce impacts on motor vehicle, bicycle, pedestrian, and transit circulation. The Construction Management Plans shall include, but not necessarily be limited to, the following: • Location of construction staging areas for materials, equipment, and vehicles. • Notification procedures for adjacent property owners and public safety personnel regarding when major deliveries, detours, and lane closures will occur. • Identification of haul routes for movement of construction vehicles that would minimize impacts on vehicular and pedestrian traffic, circulation, and safety; and provision for monitoring surface streets used for haul routes so that any damage and debris attributable to the haul trucks can be

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	**Carry Forward or Modify into Specific Plan EIR?**	**Mitigation Measures Carried Forward or Modified into the Baylands Specific Plan EIR**
	• Provisions for removal of trash generated by construction activity. A process for responding to, and tracking, complaints pertaining to construction activity, including identification of an onsite complaint manager.		identified and corrected by the project applicant. • Provisions for removal of trash generated by construction activity. • A process for responding to, and tracking, complaints pertaining to construction activity, including identification of an on-site complaint manager. *Reasons for revisions to this Program EIR Mitigation Measure:* • *Renumbering and adding a title to this measure is needed for consistency with all mitigation measures contained in this EIR.* • *Consistent with its original intent, this measure has been clarified to include infrastructure projects and is intended for project subject to City of Brisbane review and approval.*
Implementation of C/CAG trip generation reduction requirements	**4.N-13:** Prior to issuance of the first building occupancy permit for new development other than improvement or relocation of an existing use within the Project Site, the developer(s) and/or tenants of Project Site land uses shall prepare, submit to the City/County Association of Governments of San Mateo County (C/CAG) for approval, and establish a Transportation Demand Management (TDM) program to mitigate the C/CAG project impact of generating more than 100 net new vehicle trips during the peak traffic hours. Implementation of TDM programs shall be made a condition of approval for all new development within the Project Site that generates 100 or more net new trips during the AM or PM peak hour. A summary of	**No.** Increased traffic and resulting level of service at intersections is no longer considered to be a significant environmental effect. TDM programs remain an important tool for addressing energy, air quality, and GHG impacts. To that end, the City of Brisbane adopted a TDM consistent with the C/CAG program subsequent to certification of the Program EIR. Analyses conducted for this EIR reflect compliance with the City's TDM requirements. Program EIR Mitigation Measure 4.N-13 was not therefore carried forward from the Program EIR.	

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	**Carry Forward or Modify into Specific Plan EIR?**	**Mitigation Measures Carried Forward or Modified into the Baylands Specific Plan EIR**
	recommended TDM strategies can be found in Table 4.N-45.		
Demand for loading areas	**4.N-17:** Each site-specific development projects shall provide sufficient loading areas in appropriate locations such that loading activities, including loading vehicle queuing, will not block roadway or onsite parking area travel lanes, or bicycle or pedestrian facilities.	**Yes.** This measure is relevant to the 2025 Specific Plan.	**MM TRA-3b: Loading Areas (Program EIR Mitigation Measure 4.N-17).** Each site-specific development and infrastructure projects shall provide sufficient loading and unloading areas in appropriate locations such that loading and unloading activities, including ~~loading~~ vehicle queuing, will not block roadway or onsite parking area travel lanes, or bicycle or pedestrian facilities. *Reason for revisions to this Program EIR Mitigation Measure:* • *Renumbering and adding a title to this measure is needed for consistency with all mitigation measures contained in this EIR.* • *Consistent with its original intent, this measure has been clarified to include infrastructure projects and both loading and unloading activities.*

g. Air Quality

Table 4.21-6: Program EIR Air Quality Mitigation Measures

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	**Carry Forward or Modify into Specific Plan EIR?**	**Mitigation Measures Carried Forward into the Baylands Specific Plan EIR**
Dust generation during construction	**Mitigation Measure 4.B-1:** To reduce fugitive dust emissions, the following provisions shall be incorporated into construction specifications for all site-specific development projects within the Project Site. These measures would reduce fugitive dust emissions primarily during soil movement, grading and demolition activities but also during vehicle and equipment movement on unpaved project sites. ***Basic Controls that Apply to All Construction Sites*** 1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered as needed, but no less than two times per day on days with no precipitation. 2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered. 3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited. 4. All vehicle speeds on unpaved roads shall be limited to 15 mph. 5. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used. 6. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California	**No.** Required preparation of SWPPPs would mandate all the best management practices identified in Program EIR Mitigation Measure 4.B-1, which is therefore not carried forward into the Specific Plan EIR.	

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	**Carry Forward or Modify into Specific Plan EIR?**	**Mitigation Measures Carried Forward into the Baylands Specific Plan EIR**
	airborne toxics control measure Title 13, Section 2485 of California Code of Regulations). Clear signage shall be provided for construction workers at all access points. 7. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation. 8. A publicly visible sign shall be posted with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations. 9. Construction foreman and crew shall receive training from contractors on implementation of the above emission reduction techniques prior to each development phase.		
Generate cumulatively considerable construction emissions of criteria pollutants	**4.B-2a:** To reduce construction vehicle emissions, the following provisions shall be incorporated into construction specifications for all projects on the Baylands: i. Idling times shall be minimized either by shutting diesel-powered or gasoline-powered equipment off when not in use or reducing the maximum idling time of diesel-powered equipment to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.	**Yes.** Program EIR Mitigation Measure 4.B-2a, which sets requirements to reduce emissions of criteria pollutants during construction, is relevant to the Specific Plan EIR and is to be carried forward from the Program EIR.	**MM AQ-1a: Clean Off-Road Construction Equipment (Program EIR Mitigation Measure 4.B-2a).** To reduce construction vehicle emissions, the following provisions shall be incorporated into construction specifications for all site-specific development and on- and off-site infrastructure projects ~~on the Baylands~~: i. Idling times shall be minimized either by shutting diesel-powered or gasoline-powered equipment off when not in use or reducing the maximum idling time of diesel-powered equipment to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	**Carry Forward or Modify into Specific Plan EIR?**	**Mitigation Measures Carried Forward into the Baylands Specific Plan EIR**
	ii. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. It shall be the contractor's responsibility to ensure that all equipment has been checked by a certified mechanic and determined to be running in proper condition prior to operation. iii. All construction contract specifications shall include a requirement that on-road diesel trucks used to transport spoils consist of 2007 or newer model-year trucks with factory-built engines. All on-road diesel trucks shall be required to have emission control labels as specified in 13 CCR 2183(c) or any subsequent updates to this CARB regulation, whichever is more stringent. The construction contract specifications shall require that the contractor submit to the City a comprehensive inventory of all on-road trucks used to haul spoils. The inventory shall include each vehicle's license plate number, the engine production year, and a notation of whether the truck is in possession of an emission control label as defined in 13 CCR. The contractor shall update the inventory and submit it monthly to the City throughout the duration of the project.		signage shall be provided for construction workers at all access points. ii. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. It shall be the contractor's responsibility to ensure that all equipment has been checked by a certified mechanic and determined to be running in proper condition prior to operation. iii. All construction contract specifications shall include a requirement that on-road diesel trucks used to transport spoils consist of ~~2007~~ 2020 or newer model-year trucks with factory-built engines. All on-road diesel trucks shall be required to have emission control labels as specified in 13 CCR 2183(c) or any subsequent updates to this CARB regulation, whichever is more stringent. The construction contract specifications shall require that the contractor submit to the City a comprehensive inventory of all on-road trucks used to haul spoils. The inventory shall include each vehicle's license plate number, the engine production year, and a notation of whether the truck is in possession of an emission control label as defined in 13 CCR. The contractor shall update the inventory and submit it monthly to the City throughout the duration of the project. *Reasons for revisions to this Program EIR Mitigation Measure:* • *Renumbering and adding a title to this measure is needed for consistency with all mitigation measures contained in this EIR.* • *Because the 2025 Baylands Specific Plan would require offsite infrastructure improvements, this mitigation measure has been revised to include*

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	Carry Forward or Modify into Specific Plan EIR?	Mitigation Measures Carried Forward into the Baylands Specific Plan EIR
			all development associated with the Specific Plan, not just development within the Baylands. • *The requirement that on-road diesel trucks used to transport spoils consist of 2007 or newer model-year trucks with factory-built engines has been replaced with a more stringent and feasible requirement that 2020 newer model-year trucks with factory-built engines be used.*
Generate cumulatively considerable construction emissions of criteria pollutants	**4.B-2b:** All construction contract specifications shall include a requirement that off-road construction equipment used for site improvements shall be equipped with Tier 3 (Tier 2 if greater than 750 hp) diesel engines or better. All diesel generators used for project construction must meet Tier 4 emissions standards. If new emissions standards are adopted by U.S. EPA during project construction, construction contract specifications shall incorporate whichever standard is more stringent.	**Yes.** Program EIR Mitigation Measure 4.B-2b, which sets requirements for off-road construction equipment used for site improvements to reduce emissions of criteria pollutants during construction, is relevant to the Specific Plan EIR and is to be carried forward from the Program EIR.	**MM AQ-1b: Tier 3 Off-Road Construction Equipment (Program EIR Mitigation Measure 4.B-2b).** All construction contract specifications shall include a requirement that off-road construction equipment used for site improvements shall be equipped with Tier 3 (Tier 2 if greater than 750 hp) diesel engines or better. All diesel generators used for project construction must meet Tier 4 emissions standards. If new emissions standards are adopted by U.S.EPA during project construction, construction contract specifications shall incorporate whichever standard is more stringent. *Reason for revising this Program EIR Mitigation Measure:* • *Renumbering and adding a title to this measure is needed for consistency with all mitigation measures contained in this EIR.*
Considerable net increase of criteria pollutants during operations	**4.B-4:** The following measures identified in the 2012 BAAQMD *CEQA Guidelines* shall be implemented for site-specific development projects within the Project Site and shall be included, as applicable, into commercial leases, as well as Covenants, Codes, and Restrictions (CC&Rs) within the Project Site: (i) Provide free transit passes (e.g., Clipper Card for use on Caltrain, San Francisco Municipal Railway [Muni], and SamTrans) to employees (for employers of 100 or more employees);	**No.** The 2012 BAAQMD *CEQA Guidelines* were superseded by updated Guidelines in 2022. Measures to reduce emissions of criteria pollutants that are called for in the 2022 Guidelines have been incorporated into new Specific Plan mitigation measures.	

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	**Carry Forward or Modify into Specific Plan EIR?**	**Mitigation Measures Carried Forward into the Baylands Specific Plan EIR**
	(ii) Provide and maintain secure bike parking for commercial and industrial uses (at least one space per 20 vehicle spaces) as a condition of occupancy permit/tenancy contract; (iii) Provide and maintain showers and changing facilities for employees in buildings having a gross leasable area of 25,000 square feet or more; (iv) Provide information on transportation alternatives to employees as a condition of occupancy permit/tenancy contract; (v) Establish a dedicated employee transportation coordinator for each site-specific development as a condition of occupancy permit/tenancy contract; (vi) Provide and maintain preferential carpool and vanpool parking for non-residential uses; (vii) Increase building energy efficiency by 20 percent beyond Title 24 (reduces NOx related to natural gas combustion); (viii) Require use of electrically powered landscape equipment through CC&Rs; (ix) Require only natural gas hearths in residential units as a condition of final building permit; (x) Use low VOC architectural coatings in maintaining buildings through CC&Rs; (xi) Require smart meters and programmable thermostats; (xii) Meet Green Building Code standards in all new construction (reduces NOx related to natural gas combustion); and (xiii) Install solar water heaters for all uses as feasible. A majority of these measures could be included in the TDM plan that would be required of all project		

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	**Carry Forward or Modify into Specific Plan EIR?**	**Mitigation Measures Carried Forward into the Baylands Specific Plan EIR**
	scenarios. Refer to **Mitigation Measure 4.N-13** of the Section 4.N, *Traffic and Circulation*, of this EIR.		
Generation of objectionable odors by the proposed onsite recycled water plant	**4.B-8: Recycled Water Plant Odor Management Plan.** Prior to the start of operation pursuant to issuance of a permit to operate from RWQCB, the recycled water plant shall formulate and implement a progressive Odor Management Plan for review and comment by BAAQMD prior to review and approval by the City. The Odor Management Plan shall select a sufficient number of control measures from the following menu of options identified by BAAQMD to attain a performance standard which meets the odor detection thresholds of BAAQMD Regulation 7 as achieved and verified by the BAAQMD inspector. • Activated carbon filter/carbon adsorption • Biofiltration/bio trickling filters • Fine bubble aerator • Hooded enclosures • Wet and dry scrubbers • Caustic and hypochlorite chemical scrubbers • Ammonia scrubber • Energy efficient blower system • Thermal oxidizer • Capping/covering storage basins and anaerobic ponds • Mixed flow exhaust • Wastewater circulation technology • Exhaust stack and vent location with respect to receptors	**Yes.** Because the 2025 Specific Plan project continues to include a recycled water facility, the odor control measures included in Program EIR Mitigation Measure 4.B-8 are needed.	**MM AQ-3a: Recycled Water Plant Odor Management Plan (Program EIR Measure 4.B-8).** Prior to the start of operation pursuant to issuance of a permit to operate from the RWQCB, the recycled water plant shall formulate and implement a progressive Odor Management Plan for review and comment by the BAAQMD prior to review and approval by the City. The Odor Management Plan shall select a sufficient number of control measures from the following menu of options identified by the BAAQMD to attain a performance standard which meets the odor detection thresholds of BAAQMD Regulation 7 as achieved and verified by the BAAQMD inspector. i. Activated carbon filter/carbon absorption ii. Biofiltration/bio trickling filters iii. Fine bubble aerator iv. Hooded enclosures v. Wet and dry scrubbers vi. Caustic and hypochlorite chemical scrubbers vii. Ammonia scrubber viii. Energy efficient blower system ix. Thermal oxidizer x. Capping/covering storage basins and anaerobic ponds xi. Mixed flow exhaust xii. Wastewater circulation technology xiii. Exhaust stack and vent location with respect to receptors *Reason for revising this Program EIR Mitigation Measure:*

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	**Carry Forward or Modify into Specific Plan EIR?**	**Mitigation Measures Carried Forward into the Baylands Specific Plan EIR**
			• *Renumbering and adding a title to this measure is needed for consistency with all mitigation measures contained in this EIR.*
Conflict with or obstruct implementation of the applicable air quality plan	**4.B-9:** The following TDM measures shall be implemented: i. Promote use of clean fuel-efficient vehicles through preferential parking and/or installation of charging stations. ii. As a potential element of a required TDM program, promote zero-emission vehicles such as through a neighborhood electric vehicle program or other programs or policies to reduce the need to have a car or second car vehicles. See also Table 4.B-21.	**No.** TDM programs remain an important tool for addressing energy, air quality, and GHG impacts. To that end, the City of Brisbane adopted a TDM consistent with the C/CAG program subsequent to certification of the Program EIR. Analyses conducted for this EIR reflect compliance with the City's TDM requirements. Program EIR Mitigation Measure 4.B-9 was therefore not carried forward from the Program EIR.	

h. Greenhouse Gas Emissions

No Greenhouse Gas Emissions mitigation measures were proposed in the Program EIR.

i. Energy Resources

Table 4.21-7: Program EIR Energy Resources Mitigation Measures

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	Carry Forward or Modify into Specific Plan EIR?	Mitigation Measures Carried Forward into the Baylands Specific Plan EIR
Energy consumption.	**4.P-1:** During all Project Site construction activities, construction contractors shall implement the following measures to prevent the wasteful or inefficient use of energy during construction: • Implement work schedules and procedures that minimize equipment idle time and double handling of material; • Minimize equipment idling time either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California Airborne Toxic Control Measure Title 13, Section 2485 of California Code of Regulations [CCR]); • Switch off office equipment and lights when not in use; • Use solar power sources for road signs and other applicable equipment that will be required at the construction site; • Design all temporary roads to minimize travel distances; and • Maintain and properly tune all construction equipment in accordance with manufacturer's specifications. It shall be the contractor's responsibility to ensure that all equipment has been checked by a certified mechanic and determined to be running in proper condition prior to operation.	**No.** Analysis of energy consumption during Baylands construction concluded that a less than significant impact would result. Thus, this mitigation measure has not been carried forward from the Program EIR.	
Energy consumption.	**4.P-2a:** All new buildings within the Project Site subject to the provisions of Brisbane Municipal Code Section 15.80 shall be required to achieve a LEED Gold rating, rather than the LEED Silver rating now required by the Municipal Code. In addition, all appliances installed within the Project Site as part of original building construction shall be ENERGY STAR rated or equivalent.	**No.** This measure has been implemented by the Specific Plan and is therefore not carried forward from the Program EIR.	
Energy consumption.	**Mitigation Measure 4.P-2b:** All street and parking lot lighting within the Project Site shall be energy efficient light emitting diode (LED) based lighting, until a more efficient technology for street and parking lot lighting acceptable to the City of Brisbane becomes commercially available, at which time all street and parking lot lighting shall be the most energy efficient technology that is commercially available for street and parking lot lighting and that is also acceptable to the City of Brisbane.	**No.** Analysis of energy consumption during Baylands construction concluded that a less than significant impact would result. Thus, this mitigation measure has not been carried forward from the Program EIR.	

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	**Carry Forward or Modify into Specific Plan EIR?**	**Mitigation Measures Carried Forward into the Baylands Specific Plan EIR**
Energy consumption.	**4.P-2c:** Should the CPP scenario be selected, Project Site development shall provide for an equivalent amount of onsite renewable energy generation as is proposed in the DSP scenario (currently estimated to be 42,000 to 45,000 megawatt hours annually). Should the CPP-V scenario be selected, Project Site development shall provide for an equivalent amount of onsite renewable energy generation as is proposed in the DSP scenario (currently estimated to be 42,000 to 45,000 megawatt hours annually) in addition to the renewable energy generation proposed as part of the Recology expansion.	**No.** Because the scenario to which this mitigation measure refers was not approved, Program EIR Mitigation Measure 4.P-2c was not carried forward from the Program EIR.	

j. Noise and Vibration

Table 4.21-8: Program EIR Noise and Vibration Mitigation Measures

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	**Carry Forward or Modify into Specific Plan EIR?**	**Mitigation Measures Carried Forward into the Baylands Specific Plan EIR**
Exposure of onsite residential to noise levels in excess of City standards.	**4.J-1a:** All residential development within the Project Site shall minimize the exposure of people within the Project Site to noise from Caltrain operations through construction of noise barriers or maintenance of buffer distances, and shall adhere to the following noise performance standards: • Exterior noise level of below 65 dBA, DNL for outdoor common areas within any approved residential use; and • Interior noise standard of 45 dBA, DNL. These noise levels shall be attained through use of appropriate building materials as required by state of California Title 24 standards. Compliance with these performance standards shall be verified by an acoustical professional prior to issuance of a building permit. Specific measures to achieve these performance standards shall include all or any combination of the following options: • Site design measures, including use of building orientation to minimize window exposure toward noise sources, avoid placing balcony areas in high noise areas, and use of buildings as noise barriers. • Use of acoustically rated building materials (insulation and windows); • Construction of architectural noise barriers between sources and receptors; and • Provision of landscaping or other non-noise-sensitive buffer zones between sources and receptors.	**Yes.** Program EIR Mitigation Measure 4.J-1a, which protects Baylands residents from noise generated by railroad operations, is relevant to the Specific Plan EIR and therefore carried forward from the Program EIR.	**MM NOI-4a: Residential Exposure to Railroad Noise (Program EIR Mitigation Measure 4.J-1a).** All residential development ~~within the Project Site~~ shall minimize the exposure of people within the ~~Project Site~~ Specific Plan area to noise from Caltrain and High-Speed Rail operations through construction of noise barriers or maintenance of buffer distances, and shall adhere to the following noise performance standards: • Exterior noise level of below 65 dBA, DNL for outdoor common areas within any approved residential use; and • Interior noise standard of 45 dBA, DNL. These noise levels shall be attained through use of appropriate building materials as required by state of California Title 24 standards. Compliance with these performance standards shall be verified by an acoustical professional prior to issuance of a building permit. Specific measures to achieve these performance standards shall include all or any combination of the following options: • Site design measures, including use of building orientation to minimize window exposure toward noise sources, avoid placing balcony areas in high noise areas, and use of buildings as noise barriers. • Use of acoustically rated building materials (insulation and windows); • Construction of architectural noise barriers between sources and receptors; and • Provision of landscaping or other non-noise-sensitive buffer zones between sources and receptors.

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	**Carry Forward or Modify into Specific Plan EIR?**	**Mitigation Measures Carried Forward into the Baylands Specific Plan EIR**
			Reasons for revisions to this Program EIR Mitigation Measure: • *Renumbering and adding a title to this measure is needed for consistency with all mitigation measures contained in this EIR.* • *Because the term "Project site" now includes offsite lands not analyzed in the Program EIR, references have been revised to "Specific plan area," consistent with the original intent of this measure.* • *In addition to Caltrain, rail operations to which this measure would apply will include High-Speed Rail operations.*
Exposure of hotel uses within the Baylands to noise levels in excess of City standards.	**Mitigation Measure 4.J-1b:** All hotel projects within the Project Site shall minimize the exposure of people within the Project Site to noise from Caltrain operations through construction of noise barriers or maintenance of buffer distances, and shall adhere to the following noise performance standards: • Exterior noise level of below 65 dBA, DNL for outdoor common areas within any approved residential use or hotel; and • Interior noise standard of 45 dBA, DNL These noise levels shall be attained through use of appropriate building materials as required by state of California Title 24 standards. Compliance with these performance standards shall be verified by an acoustical professional prior to issuance of a building permit. Specific measures to achieve these performance standards shall include all or any combination of the following options: • Site design measures, including use of building orientation, to minimize window exposure toward noise sources, avoid placing balcony areas in high noise areas, and use of buildings as noise barriers; • Use of acoustically rated building materials (insulation and windows);	**Yes.** Program EIR Mitigation Measure 4.J-1b, which protects Baylands hotels from noise generated by railroad operations, is relevant to the Specific Plan EIR and therefore carried forward from the Program EIR.	**MM NOI-4b: Hotel Exposure to Railroad Noise (Program EIR Mitigation Measure 4.J-1b).** All hotel projects within the ~~Project Site~~ Specific Plan area shall minimize the exposure of people within the Specific Plan area to noise from Caltrain and High-Speed Rail operations through construction of noise barriers or maintenance of buffer distances, and shall adhere to the following noise performance standards: • Exterior noise level of below 65 dBA, DNL for outdoor common areas within any approved residential use or hotel; and • Interior noise standard of 45 dBA, DNL These noise levels shall be attained through use of appropriate building materials as required by state of California Title 24 standards. Compliance with these performance standards shall be verified by an acoustical professional prior to issuance of a building permit. Specific measures to achieve these performance standards shall include all or any combination of the following options: • Site design measures, including use of building orientation to minimize window exposure toward noise sources, avoid placing balcony areas in high noise areas, and use of buildings as noise barriers;

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	**Carry Forward or Modify into Specific Plan EIR?**	**Mitigation Measures Carried Forward into the Baylands Specific Plan EIR**
	• Construction of architectural noise barriers between sources and receptors; and • Provision of landscaping or other non-noise-sensitive buffer zones between sources and receptors.		• Use of acoustically rated building materials (insulation and windows); • Construction of architectural noise barriers between sources and receptors; and • Provision of landscaping or other non-noise-sensitive buffer zones between sources and receptors. *Reasons for revisions to this Program EIR Mitigation Measure:* • *Renumbering and adding a title to this measure is needed for consistency with all mitigation measures contained in this EIR.* • *Because the term "Project site" now includes offsite lands not analyzed in the Program EIR, references have been revised to "Specific plan area," consistent with the original intent of this measure.* • *In addition to Caltrain, rail operations to which this measure would apply will include High-Speed Rail operations.*
Exposure of onsite residents to vibration from rail operations.	**Measure 4.J-2a:** All development in the Baylands shall be designed to avoid vibration from Caltrain operations in excess of 72 VdB for residences. Prior to issuance of any building permit for structures intended for human occupancy within 200 feet of the mainline track, a detailed vibration design study shall be completed by a qualified acoustical engineer to confirm the ground vibration levels and frequency content along the Caltrain tracks and to determine appropriate design to limit interior vibration levels to 72 VdB for residences. Implementation of the recommended measures of the acoustical study into project design elements shall be verified by the Brisbane Building Department as part of the plan-check process. Specific measures to achieve the performance standards set forth above shall include all or any combination of the following methods:	**Yes.** Program EIR Mitigation Measure 4.J-2a, which protects Baylands residents from vibration generated by railroad operations, is relevant to the Specific Plan EIR and therefore carried forward from the Program EIR.	**MM NOI-6: Exposure to Vibration from Rail Operations (Program EIR Mitigation Measure 4.J-2a).** All development in the Baylands development shall be designed to avoid vibration from Caltrain and other rail operations in excess of 72 VdB. Prior to issuance of any building permit for residential or hotel structures intended for human occupancy within 200 feet of the mainline track, a detailed vibration design study shall be completed by a qualified acoustical engineer to confirm ground vibration levels and frequency of operations along the Caltrain rail line and determine appropriate design that would limit interior vibration levels to less than 72 VdB within residences and hotel rooms. Implementation of the recommended measures of the acoustical study into project design elements shall be verified by the Brisbane Building Department as part of the plan-check process.

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	**Carry Forward or Modify into Specific Plan EIR?**	**Mitigation Measures Carried Forward into the Baylands Specific Plan EIR**
	• Use of vibration isolation techniques such as supporting the new building foundations on elastomer pads similar to bridge bearing pads; • Installation of vibration wave barriers. Wave barriers would consist of control trenches or sheet piles, which are analogous to controlling noise with sound barrier. The applicability of this technique depends on the characteristics of the vibration waves.		Specific measures to achieve the performance standard set forth above shall include all or any combination of the following methods: • Use of vibration isolation techniques such as supporting the new building foundations on elastomer pads similar to bridge bearing pads; • Installation of vibration wave barriers. Wave barriers would consist of control trenches or sheet piles, which are analogous to controlling noise with sound barrier. The applicability of this technique depends on the characteristics of the vibration waves. *Reasons for revisions to this Program EIR Mitigation Measure:* • *Renumbering and adding a title to this measure is needed for consistency with all mitigation measures contained in this EIR.* • *Because this mitigation is intended to address impacts related to residential and hotel uses, it has been revised to apply to those two uses rather than to "all" Baylands development.*
Exposure of onsite historic structures to vibration from pile driving operations.	**4.J-2b: Pre-Construction Assessment to Minimize Structural Pile-Driving Vibration Impacts on Adjacent Historic Buildings and Structures and Vibration Monitoring.** Any development within 85 feet of the Roundhouse and the Machinery & Equipment Building that would require pile driving or other construction techniques that could result in vibrations of 0.25 in/sec shall engage a qualified geotechnical engineer subject to City approval to conduct a pre-construction assessment of existing subsurface conditions and the structural integrity of the nearby historic structures subject to pile-driving or other vibration-inducing activity before a building permit is issued to demonstrate that the proposed construction activities would not result in vibration-induced damage to the Roundhouse or the Machinery & Equipment building.	**Yes.** Program EIR Mitigation Measure 4.J-2b, which protects Baylands historic structures from vibration generated by impact pile driving, is relevant to the Specific Plan EIR and therefore carried forward from the Program EIR.	**MM NOI-5a: Pre-Construction Assessment to Minimize Structural Pile-Driving Vibration Impacts on Adjacent Historic Buildings and Structures and Vibration Monitoring (Program EIR Mitigation Measure 4.J-2b).** Any development within 85 feet of the Roundhouse and the Machinery & Equipment Building that would require pile driving or other construction techniques that could result in vibrations of 0.25 in/sec shall engage a qualified geotechnical engineer subject to City approval to conduct a pre-construction assessment of existing subsurface conditions and the structural integrity of the nearby historic structures subject to piledriving or other vibration-inducing activity before a building permit is issued to demonstrate that the proposed construction activities would not result in vibration-induced damage

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	Carry Forward or Modify into Specific Plan EIR?	Mitigation Measures Carried Forward into the Baylands Specific Plan EIR
	If recommended by the pre-construction assessment, groundborne vibration monitoring of nearby historic structures shall be required. Such methods and technologies shall be based on the specific conditions at the construction site, such as, but not limited to, the pre-construction surveying of potentially affected historic structures and underpinning of foundations of potentially affected structures, as necessary. The pre-construction assessment shall include a monitoring program to detect ground settlement or lateral movement of structures in the vicinity of pile-driving activities. Monitoring shall be maintained while construction occurs within 85 feet of historic structures, and results shall be submitted to the City Engineer. In the event of unacceptable ground with the potential to cause structural damage movement (in excess of 0.25 in/sec PPV at historic structures), as determined by the City Engineer, all impact work shall cease until corrective measures (e.g., installation of vibration wave barriers) are implemented to reduce ground movement to below 0.25 inches PPV. In addition, the following measure shall be implemented: • Evaluate and implement feasible measures for reducing vibration, such as alternative pile driving methods (e.g., cast- in-drilled-hole piles versus driven piles), alternative foundation types for the new construction (e.g., spread footings versus driven piles), alternative compaction methods, and physical measures (intervening trench, increased distance). • Require monitoring to be conducted at the building during construction. This monitoring can include crack gages on existing cracks and vibration amplitude monitoring. Establish warning and stop work thresholds for monitoring. Implement visual and audible signals that are triggered by a vibration monitor when exceedances of warning and stop work thresholds occur. If warning thresholds are		to the Roundhouse or the Machinery & Equipment building. If recommended by the pre-construction assessment, groundborne vibration monitoring of nearby historic structures shall be required. Such methods and technologies shall be based on the specific conditions at the construction site such as, but not limited to, the pre-construction surveying of potentially affected historic structures and underpinning of foundations of potentially affected structures, as necessary. The pre-construction assessment shall include a monitoring program to detect ground settlement or lateral movement of structures in the vicinity of pile-driving activities. Monitoring shall be maintained while construction occurs within 85 feet of historic structures, and results shall be submitted to the City Engineer. In the event of unacceptable ground with the potential to cause structural damage movement (in excess of 0.25 in/sec PPV at historic structures), as determined by the City Engineer, all impact work shall cease until corrective measures (e.g., installation of vibration wave barriers) are implemented to reduce ground movement to below 0.25 inches PPV. In addition, the following measure shall be implemented: • Evaluate and implement feasible measures for reducing vibration, such as alternative pile driving methods (e.g., cast-in-drilled-hole piles versus driven piles), alternative foundation types for the new construction (e.g., spread footings versus driven piles), alternative compaction methods, and physical measures (intervening trench, increased distance). • Require monitoring to be conducted at the building during construction. This monitoring can include crack gages on existing cracks and vibration amplitude monitoring. Establish warning and stop work thresholds for monitoring. Implement visual and audible signals that are triggered by a vibration

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	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	**Carry Forward or Modify into Specific Plan EIR?**	**Mitigation Measures Carried Forward into the Baylands Specific Plan EIR**
	exceeded routinely, consider alternative construction approaches. • If the stop work threshold is exceeded, evaluate the condition of the building for damage. If no damage is indicated consult with structural engineer and/or architectural historian to assess whether higher thresholds are possible and adjust as appropriate. • If damage occurs, determine if any other construction approaches are feasible to reduce vibration. If none is available examine the severity of the damage to determine if damage is minor and repair is feasible. If repair is feasible continue with construction but monitor vibration and damage closely to ensure that damage remains repairable. Consider whether a lower stop work threshold is feasible. • If damage approaches becoming unrepairable and vibration levels have approached or exceeded the stop work threshold repeatedly, reconsider construction of the project. • Repair any damage that has occurred.		monitor when exceedances of warning and stop work thresholds occur. If warning thresholds are exceeded routinely, consider alternative construction approaches. • If the stop work threshold is exceeded, evaluate the condition of the building for damage. If no damage is indicated consult with structural engineer and/or architectural historian to assess whether higher thresholds are possible and adjust as appropriate. • If damage occurs determine if any other construction approaches are feasible to reduce vibration. If none is available examine the severity of the damage to determine if damage is minor and repair is feasible. If repair is feasible continue with construction but monitor vibration and damage closely to ensure that damage remains repairable. Consider whether a lower stop work threshold is feasible. • ~~If damage approaches becoming unrepairable and vibration levels have approached or exceeded the stop work threshold repeatedly, reconsider construction of the project.~~ • Repair any damage that has occurred. *Reasons for revisions to this Program EIR Mitigation Measure:* • *Renumbering and adding a title to this measure is needed for consistency with all mitigation measures contained in this EIR.* • *Should repeated violation of this mitigation measure occur, the building permit could be revoked. In addition, vibration levels from Baylands development, including impact pile driving, would not be sufficient to cause irreparable damage to a structure.*

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	**Carry Forward or Modify into Specific Plan EIR?**	**Mitigation Measures Carried Forward into the Baylands Specific Plan EIR**
Exposure of underground utilities to vibration from pile driving operations.	**4.J-2c:** All development sites requiring pile driving shall have underground utility[375] surveys completed before a building permit is issued to demonstrate that pile driving will be located a minimum 15 feet from buried utilities. Underground utilities surveys shall be submitted to the City for review and consultation with affected utilities a minimum of two weeks prior to commencement of construction activities. If underground utilities are identified within 15 feet of proposed pile driving activities, alternative pile installation methods shall be required. Alternative methods may include use of sonic drivers or drilled and cast-in-place piles. All pile driving shall be designed so as to result in peak particle velocity of less than 4.0 in/sec (100 mm/s) at the location of underground utilities. Within one week following completion of pile driving activities, a post-construction assessment of all underground utilities within 30 feet of the pile driving activity shall be submitted to the City by the contractor, confirming that no damage to any underground utilities occurred as the result of the pile driving activity. Should the post-construction assessment determine that underground utilities were damaged by pile driving activities, such damage shall be repaired by the contractor to the satisfaction of the City and affected utility.	**Yes.** Program EIR Mitigation Measure 4.J-2c, which protects Baylands underground utility lines from vibration generated by impact pile driving, is relevant to the Specific Plan EIR and therefore carried forward from the Program EIR.	**MM NOI-5b: Protection of Underground Utilities (Program EIR Mitigation Measure 4.J-2c).** All development sites requiring pile driving shall have underground utility[7] surveys completed before a building permit is issued to demonstrate that pile driving will be located a minimum 15 feet from buried utilities. Alternative methods may include use of sonic drivers or drilled and cast-in-place piles. ~~Underground utilities surveys shall be submitted to the City for review and consultation with affected utilities a minimum of two weeks prior to commencement of construction activities. If underground utilities are identified within 15 feet of proposed pile driving activities, alternative pile installation methods shall be required.~~ All pile driving shall be designed so as to result in peak particle velocity of less than 4.0 in/sec (100 mm/s) at the location of underground utilities. Within one week following completion of pile driving activities, a post-construction assessment of all underground utilities within 30 feet of the pile driving activity shall be submitted to the City by the contractor, confirming that no damage to any underground utilities occurred as the result of the pile driving activity. Should the post-construction assessment determine that underground utilities were damaged by pile driving activities, such damage shall be repaired by the contractor to the satisfaction of the City and affected utility. *Reasons for revisions to this Program EIR Mitigation Measure:* • *Renumbering and adding a title to this measure is needed for consistency with all mitigation measures contained in this EIR.*

[375] Underground utilities include electrical lines, irrigation lines, reclaimed water lines, municipal water lines, sewer lines, gravity flow facilities (storm, sanitary and laterals), cable/communication lines and gas lines.

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	**Carry Forward or Modify into Specific Plan EIR?**	**Mitigation Measures Carried Forward into the Baylands Specific Plan EIR**
			• *Revisions to the timing for preparation of utility surveys resolve a potential conflict in requirements.* • *The revised text acknowledges that the vibration performance standard in this mitigation measure along with Specific Plan EIR Mitigation Measure MM NOI-1e would supersede the provision in Program EIR MM 4.J-2c addressing alternatives to pile driving.*
Increases in ambient noise levels from stationary and mobile operational sources.	**4.J-3a:** All development within the Project Site shall incorporate the following design features into the final site plans prior to issuance of a building permit: • Building equipment (e.g., heating, ventilation, and air conditioning units) shall be located away from nearby residences, on building rooftops, or adequately shielded within an enclosure that effectively blocks the line of sight of the source from receivers in order to meet a performance standard of 5 dBA over existing ambient noise levels (generally perceptible increase to most persons) for this source which would potentially operate more than 20 minutes in a given hour. • Formal truck delivery areas (e.g., loading bays) shall be located at least 100 feet from residences to maintain noise levels of less than 5 dBA over existing monitored levels, except within mixed-use buildings containing both residential and commercial uses. Truck delivery bays and waste collection areas shall be located so that they are blocked by Project buildings or designed with noise reduction barriers to reduce noise impacts on residences or other sensitive receptors. • Where truck delivery bays are provided within mixed-use buildings containing both residential and commercial uses, they shall be located and designed so as to minimize the effects of noise from loading activities on residential uses within the building.	**Yes.** Program EIR Mitigation Measure 4.J-3a, which minimizes operational noise increases, is relevant to the Specific Plan EIR and therefore carried forward from the Program EIR.	**MM NOI-2a: Project Design Features (Program EIR Mitigation Measure 4.J-3a).** All development within the ~~Project Site~~ Baylands shall incorporate the following design features into the final site plans prior to issuance of a building permit: • Building equipment (e.g., heating, ventilation, and air conditioning units) shall be located away from nearby residences, on building rooftops, or adequately shielded within an enclosure that effectively blocks the line of sight of the source from receivers in order to meet a performance standard of 5 dBA over existing ambient noise levels (generally perceptible increase to most persons) for this source which would potentially operate more than 20 minutes in a given hour. • ~~Formal~~Designated truck delivery areas (e.g., loading bays) shall be located at least 100 feet from residences to maintain noise levels of less than 5 dBA over existing monitored levels, except within mixed-use buildings containing both residential and commercial uses. Truck delivery bays and waste collection areas shall be located so that they are blocked by Project buildings or designed with noise reduction barriers to reduce noise impacts on residences or other sensitive receptors. • Where truck delivery bays are provided within mixed-use buildings containing both residential and commercial uses, they shall be located and designed

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	**Carry Forward or Modify into Specific Plan EIR?**	**Mitigation Measures Carried Forward into the Baylands Specific Plan EIR**
			so as to minimize the effects of noise from loading activities on residential uses within the building. *Reasons for revisions to this Program EIR Mitigation Measure:* • *Renumbering and adding a title to this measure is needed for consistency with all mitigation measures contained in this EIR.* • *Because the term "Project site" now includes offsite lands not analyzed in the Program EIR, references have been revised to "Specific plan area," consistent with the original intent of this measure.* • *The term "Formal" in the second bullet point could be misinterpreted and is being revised consistent with its original intent to apply to truck routes designated as such by local agencies.*
Increases in ambient noise levels from onsite wind energy generation. **DSP, DSP-V, CPP, & CPP-V scenarios**	**4.J-3b:** Small wind turbines shall be sited a minimum of 50 feet from the property line of noise sensitive land uses (e.g., residential, schools, religious institutions). Utility scale wind turbines shall be sited a minimum of 100 feet from the property line of noise sensitive land uses and separated from one another by a distance no less than a minimum of two times the rotor diameter of the larger turbine.	**No.** Because wind turbines are no longer proposed, Program EIR Mitigation Measure 4.J-3b is not carried forward into the Specific Plan EIR.	
Construction noise.	**4.J-4a:** All applicants for site-specific development within the Project Site shall implement site-specific noise attenuation measures during all construction-related activities under the supervision of a qualified acoustical consultant as a pre-requisite to issuance of site grading(s). These measures shall be included in a Noise Control Plan that shall be submitted for review and approval by the City of Brisbane Building Department to ensure that construction noise does not exceed the standards set forth in the City's Noise Ordinance. These attenuation measures shall include all or any combination of the following control strategies:	**Yes.** Program EIR Mitigation Measure 4.J-4a, which minimizes construction noise, is relevant to the Specific Plan EIR and therefore carried forward from the Program EIR.	**MM NOI-1a: Construction Noise Control (Program EIR Mitigation Measure 4.J-4a).** All applicants for site-specific development within the ~~Project Site~~ Baylands shall implement site-specific noise attenuation measures during all construction-related activities under the supervision of a qualified acoustical consultant as a pre-requisite to issuance of site grading(s). These measures shall be included in a Noise Control Plan that shall be submitted for review and approval by the City of Brisbane Building Department to ensure that construction noise does not exceed the standards set forth in the City's Noise Ordinance. These attenuation

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	**Carry Forward or Modify into Specific Plan EIR?**	**Mitigation Measures Carried Forward into the Baylands Specific Plan EIR**
	• Limit standard construction activities to between 7:00 a.m. and 7:00 p.m. Monday through Friday and between 9:00 a.m. and 7:00 p.m. on weekends and holidays. Pile driving and/or other extreme noise-generating activities (greater than 90 dBA) would be limited to between 8:00 a.m. and 4:00 p.m. Monday through Friday, with no extreme noise-generating activity permitted between 12:30 p.m. and 1:30 p.m. No extreme noise-generating activities would be allowed on weekends and holidays; • Equipment and trucks used for construction shall use the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds); • Impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for construction shall be hydraulically or electrically powered wherever possible to avoid noise associated with compressed air exhaust from pneumatically powered tools. Where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves shall be used where feasible; this could achieve a reduction of 5 dBA. Quieter procedures, such as use of drills rather than impact tools, shall be used; • Stationary noise sources shall be located as far as possible from adjacent receptors, and they shall be muffled and enclosed within temporary sheds, incorporate insulation barriers, or include other measures; • Erect temporary plywood noise barriers around the construction site when adjacent occupied sensitive land uses are present within 75 feet;		measures shall include all or any combination of the following control strategies: • Limit ~~standard~~ construction activities to between 7:00 a.m. and 7:00 p.m. Monday through Friday and between 9:00 a.m. and 7:00 p.m. on weekends and holidays; • Pile driving and/or other extreme noise- generating activities (L_{max} greater than 90 dBA) would be limited to between 8:00 a.m. and 4:00 p.m. Monday through Friday, with no extreme noise-generating activity permitted between 12:30 p.m. and 1:30 p.m. No extreme noise-generating activities would be allowed on weekends and holidays; • Equipment and trucks used for construction shall use the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds; • Impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for construction shall be hydraulically or electrically powered wherever possible to avoid noise associated with compressed air exhaust from pneumatically powered tools. Where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves shall be used where feasible; this could achieve a reduction of 5 dBA. Quieter procedures, such as use of drills rather than impact tools, shall be used; • Stationary noise sources shall be located as far as possible from adjacent receptors, and they shall be muffled and enclosed within temporary sheds, incorporate insulation barriers, or include other measures;

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	**Carry Forward or Modify into Specific Plan EIR?**	**Mitigation Measures Carried Forward into the Baylands Specific Plan EIR**
	• Implement "quiet" pile-driving technology (such as pre-drilling of piles and the use of more than one pile driver to shorten the total pile driving duration), where feasible, in consideration of geotechnical and structural requirements and conditions; • Use noise control blankets on building structures as buildings are erected to reduce noise emission from the site; and • Use cushion blocks to dampen impact noise.		• Erect temporary plywood noise barriers around the construction site when adjacent occupied sensitive land uses are present within 75 feet; • Implement "quiet" pile-driving technology (such as pre-drilling of piles and the use of more than one pile driver to shorten the total pile driving duration), where feasible, in consideration of geotechnical and structural requirements and conditions; • Use noise control blankets on building structures as buildings are erected to reduce noise emission from the site; and • Use cushion blocks to dampen impact noise. *Reasons for revisions to this Program EIR Mitigation Measure:* • *Renumbering and adding a title to this measure is needed for consistency with all mitigation measures contained in this EIR.* • *Because the term "Project site" now includes offsite lands not analyzed in the Program EIR, references have been revised to "Specific plan area," consistent with the original intent of this measure.* • *Deleting the word "standard" clarifies that the first bullet point applies to all construction activities other than pile driving and other extreme noise generating activities addressed in the second bullet point.* • *Addition of the term "L_{max}" clarifies the specific noise metric to which permitted hours for pile driving would apply.*
Construction noise	**4.J-4b:** Prior to City issuance of grading permits, applicants for site-specific development projects within the Project Site shall submit to the Brisbane Building Department, a list of measures that will be undertaken to respond to and track complaints pertaining to construction noise, including:	**Yes.** Program EIR Mitigation Measure 4.J-4b, which provides construction noise monitoring, is relevant to the Specific Plan EIR and therefore carried forward from the Program EIR.	**MM NOI-1b: Noise complaint response and monitoring Program EIR Mitigation Measure 4.J-4b).** Prior to City issuance of grading permits, applicants for site-specific development projects shall submit to the Brisbane Community Development Department a list of measures that will be undertaken to respond to and track complaints pertaining to construction noise, including:

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	**Carry Forward or Modify into Specific Plan EIR?**	**Mitigation Measures Carried Forward into the Baylands Specific Plan EIR**
	• A procedure for notifying the Building Department staff of complaints; • A plan for posting onsite signs pertaining to permitted construction days and hours, complaint procedures, and the contact person who should be notified in the event of a problem; • A listing of telephone numbers (during regular construction hours and off-hours); • Designation of an onsite construction complaint manager for Project site development; • Notification of neighbors within 300 feet of the Project site development construction area about the estimated duration of the pile-driving activity at least 30 days in advance of the activity; and • A preconstruction meeting with the job inspectors and the general contractor/onsite project manager to confirm that noise mitigation and practices (including construction hours, neighborhood notification, posted signs, etc.) are completed.		• A procedure for notifying the City staff of complaints; • A plan for posting on-site signs pertaining to permitted construction days and hours, complaint procedures, and the contact person who should be notified in the event of a problem; • A listing of telephone numbers (during regular construction hours and off-hours); • Designation of an on-site construction complaint manager; • Notification of neighbors within 300 feet of the construction area about the estimated duration of pile driving activity at least 30 days in advance of the activity; and • A preconstruction meeting with the job inspectors and the general contractor/on-site project manager to confirm that noise mitigation and practices (including construction hours, neighborhood notification, posted signs, etc.) are completed. *Reason for revising this Program EIR Mitigation Measure:* • *Renumbering and adding a title to this measure is needed for consistency with all mitigation measures contained in this EIR.*

k. Hazards and Hazardous Materials

Table 4.21-9: Comparison of Program EIR and Baylands Development EIR Hazards and Hazardous Materials Significance Conclusions

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	**Carry Forward or Modify into Specific Plan EIR?**	**Mitigation Measures Carried Forward into the Baylands Specific Plan EIR**
Routine use, storage, transport, and disposal of hazardous materials	**4.G-2a (Confirm Achievement of Remediation Goals):** Prior to approval of a specific plan for any parcel within the Project Site, the project applicant shall provide confirmation to the City that the Department of Toxic Substances Control (DTSC), Regional Water Quality Control Board (RWQCB), and/or the San Mateo County Environmental Health Division as the Local Enforcement Agency, as applicable, have completed their review and accepted the Remedial Action Plan or final closure and post-closure maintenance plans. Prior to issuance of a building or grading permit (other than for grading needed for remediation activities) for any parcel within OU-1, OU-2, or the former landfill, the applicant shall provide the City with evidence that the Department of Toxic Substances Control (DTSC), Regional Water Quality Control Board (RWQCB), and/or the San Mateo County Environmental Health Division as the Local Enforcement Agency in relation to the landfill have approved applicable Remedial Action Plan(s) or final closure and post-closure maintenance plans. Prior to commencement of building construction or site grading for any parcel within OU-1, OU-2, or the former landfill, the project applicant shall obtain regulatory approval from the Department of Toxic Substances Control (DTSC), Regional Water Quality Control Board (RWQCB), and/or the San Mateo County Environmental Health Division as the Local Enforcement Agency in relation to the landfill for the proposed land use, in the form of a Remediation Action Completion Report or equivalent closure	**Yes.** Program EIR Mitigation Measure 4.G-2a, which requires confirmation of the completion of site remediation or final landfill closure prior to Baylands development, is relevant to the Baylands Development Project and is carried forward from the Program EIR.	**MM HAZ-1a: Confirm Achievement of Remediation Goals (Program EIR Mitigation Measure 4.G-2a).** ~~Prior to approval of a specific plan for any parcel within the Project Site, the project applicant shall provide confirmation to the City that the Department of Toxic Substances Control (DTSC), Regional Water Quality Control Board (RWQCB), and/or the San Mateo County Environmental Health Division as the Local Enforcement Agency, as applicable, have completed their review and accepted the Remedial Action Plan or final closure and post-closure maintenance plans.~~ Prior to issuance of a building or grading permit (other than for grading needed for remediation activities) for any parcel within OU-SM~~1~~, OU-2, or the former landfill, the applicant shall provide the City with evidence that the Department of Toxic Substances Control (DTSC), Regional Water Quality Control Board (RWQCB), and/or the San Mateo County Environmental Health Division as the Local Enforcement Agency in relation to the landfill have approved Remedial Design and Implementation Plan(s) (RDIP) ~~applicable Remedial Action Plan(s)~~ or final closure and post-closure maintenance plans for the area subject to the requested permit. Prior to ~~commencement~~ issuance of a of building permit ~~construction or site grading~~ for any parcel within the ~~Project Site~~ Baylands, the project applicant shall obtain regulatory approval from the Department of Toxic Substances Control (DTSC), Regional Water Quality Control Board (RWQCB), and/or the San Mateo County Environmental Health Division as the Local Enforcement Agency in relation to the landfill

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	**Carry Forward or Modify into Specific Plan EIR?**	**Mitigation Measures Carried Forward into the Baylands Specific Plan EIR**
	letter stating that remediation goals have been achieved for proposed land uses.		for the proposed land use, in the form of a Remediation Action Completion Report or equivalent closure letter stating that remediation goals have been achieved for proposed land uses. *Reasons for revisions to this Program EIR Mitigation Measure:* • *Renumbering and adding a title to this measure is needed for consistency with all mitigation measures contained in this EIR.* • *Because the term "Project site" now includes offsite lands not analyzed in the Program EIR, references have been revised to "Baylands," consistent with the original intent of this measure.* • *Because remedial action plans for OU-SM (formerly OU-1) and OU-1 have been approved by state regulatory agencies, the requirements in the first paragraph of this measure have been fulfilled and are no longer needed.* • *The requirement for issuance of a grading permit has been modified to be approval of a Remedial Design and Implementation Plan for the area subject to the requested permit to reflect the regulatory approval that would provide sufficient information to ensure consistency of requested site grading with regulatory requirements and provide for phased grading to support any phasing of site remediation or landfill closure approved by regulatory agencies.* • *Because of the change in requirement for a grading permit described above, the requirement related to building construction has been modified to issuance of a building permit.*

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	**Carry Forward or Modify into Specific Plan EIR?**	**Mitigation Measures Carried Forward into the Baylands Specific Plan EIR**
Routine use, storage, transport, and disposal of hazardous materials	**4.G-2b (Soil and Groundwater Management Plan):** Prior to issuance of a building or grading permit for any parcel within the Project Site, a Soil and Groundwater Management Plan (SGMP) shall be prepared by a qualified environmental consulting firm, reviewed and approved by DTSC and the RWQCB and implemented by the project applicant. The Soil and Groundwater Management Plan shall also include a requirement for development and implementation of site-specific safety plans to be prepared prior to commencement of construction consistent with Occupational Safety and Health Administration (OSHA) Safety and Health Standards 29 CFR 1910.120 as well as management of groundwater produced through temporary dewatering activities. Such site-specific safety plans shall include necessary training, operating and emergency response procedures, and reporting requirements to regulate all activities that bring workers in contact with potentially contaminated soil or groundwater, landfill gas, or leachate to ensure worker safety and avoid impacts to the environment. Further, the Soil and Groundwater Management Plan shall include protocols for any areas of the site that require excavation and relocation of refuse material (e.g., building foundations and utility infrastructure) in accordance with the Title 27 of the California Code of Regulations to ensure that the integrity of the low-hydraulic-conductivity layer (LHCL) requirements are maintained.	**Yes.** Program EIR Mitigation Measure 4.G-2b, which requires preparation of a soil and groundwater management plan, is relevant to the Baylands Development Project and is carried forward from the Program EIR.	**MM HAZ-1b: Soil and Groundwater Management Plan (Program EIR Mitigation Measure 4.G-2b).** Prior to issuance of a building or grading permit for any parcel within the Baylands, a Soil and Groundwater Management Plan shall be prepared by a qualified environmental consulting firm, reviewed, and approved by DTSC and the RWQCB, and implemented by the applicant. The Soil and Groundwater Management Plan shall also include a requirement for development and implementation of site-specific safety plans to be prepared prior to commencement of construction consistent with Occupational Safety and Health Administration (OSHA) Safety and Health Standards 29 Code of Federal Regulation (CFR) 1910.120, as well as management of groundwater produced through temporary dewatering activities. Such site-specific safety plans shall include necessary training, operating and emergency response procedures, and reporting requirements to regulate all activities that bring workers in contact with potentially contaminated soil or groundwater, landfill gas, or leachate to ensure worker safety and avoid impacts on the environment. Further, the Soil and Groundwater Management Plan shall include protocols for any areas of the site that require excavation and relocation of refuse material (e.g., building foundations and utility infrastructure) in accordance with Title 27 of the California Code of Regulations to ensure that the integrity of the low-hydraulic-conductivity layer requirements is maintained. *Reason for revisions to this Program EIR Mitigation Measure:* • *Renumbering this measure is needed for consistency with all mitigation measures contained in this EIR.*

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	**Carry Forward or Modify into Specific Plan EIR?**	**Mitigation Measures Carried Forward into the Baylands Specific Plan EIR**
Routine use, storage, transport, and disposal of hazardous materials	**4.G-2c (Master Deconstruction and Demolition Plan):** City review and approval of a specific plan per the requirements of the Brisbane General Plan shall be completed prior to submittal of any application for a demolition permit within the Project Site. Prior to issuance of a demolition permit for any parcel within the Project Site, the applicable property owner shall submit a Master Deconstruction and Demolition Plan to the City Community Development Director and Building Official. The plan shall be reviewed and approved by the Community Development Director and Building Official prior to issuance of the requested demolition permit to ensure that the proposed demolition is consistent with applicable provisions of the Brisbane General Plan and the specific plan adopted pursuant to the General Plan. The demolition plan shall include documentation of hazardous materials determinations (surveys) and demolition or deconstruction recommendations in accordance with local and state requirements. If the surveys conducted by licensed professionals prior to issuance of a demolition permit per the requirements above hazardous building materials,[376] demolition or deconstruction shall proceed in accordance with applicable BAAQMD, OSHA, and Cal/OSHA requirements, which may include air permits or agency notifications, worker awareness training, exposure monitoring, medical examinations and a written respiratory protection program.	**Yes.** Program EIR Mitigation Measure 4.G-2b, which requires preparation of a master deconstruction and demolition plan, is relevant to the Baylands Development Project and is carried forward from the Program EIR.	**MM HAZ-1c: (Master Deconstruction and Demolition Plan (Program EIR Mitigation Measure 4.G-2c).** City review and approval of a specific plan per the requirements of the Brisbane General Plan shall be completed prior to submittal of any application for a demolition permit within the Project Site. Prior to issuance of a demolition permit for any parcel within the Baylands, the applicable property owner shall submit a Master Deconstruction and Demolition Plan prepared by a licensed professional to the City Building Official. The plan shall be reviewed and approved by the Building Official prior to issuance of the requested demolition permit. The demolition plan shall include documentation of hazardous materials determinations (surveys) and demolition or deconstruction recommendations in accordance with local and state requirements. If the surveys conducted by licensed professionals prior to issuance of a demolition permit per the requirements above hazardous building materials, demolition or deconstruction shall proceed in accordance with applicable Bay Area Air Quality Management District (BAAQMD), OSHA, and California Occupational Safety and Health Administration (Cal/OSHA) requirements, which may include air permits or agency notifications, worker awareness training, exposure monitoring, medical examinations, and a written respiratory protection program. *Reasons for revisions to this Program EIR Mitigation Measure:*

[376] Typical hazardous building materials include lead-based paint; asbestos-containing materials, such as insulation, paint, or fiberboards; PCBs in lighting ballasts or wiring; and mercury in thermostat switches. BAAQMD oversees the public health and environmental aspects of removal and disposal of asbestos-containing materials and other hazardous building materials. Cal/OSHA oversees worker protection and contractor licensing with respect to hazardous building materials.

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	**Carry Forward or Modify into Specific Plan EIR?**	**Mitigation Measures Carried Forward into the Baylands Specific Plan EIR**
			• *Renumbering this measure is needed for consistency with all mitigation measures contained in this EIR.* • *Preparation of the deconstruction and demolition plans by a licensed professional is a standard City requirement and has been made explicit to avoid confusion.*
Routine use, storage, transport, and disposal of hazardous materials	**4.G-2d (NPDES Permit):** Prior to issuance of a building or grading permit for any parcel within the Project Site, preparation and implementation of an industry standard spill prevention and protection procedure plan shall be conducted by a licensed professional selected or approved by the City in accordance with NPDES General Construction Permit requirements and reviewed and approved by the City Building Official. The plan shall include implementation of Best Management Practices for the storage and use of hazardous materials in accordance with California Stormwater Quality Association Construction guidelines, including emergency procedures for hazardous materials releases for materials that shall be brought onto the site as part of site development and construction activities. The plan shall include standard emergency procedures for hazardous materials releases that would be implemented during Project construction activities, identification of required personal protective equipment, proper housekeeping, spill containment procedures, training of workers to respond to accidental spills/releases, most direct route to a hospital, and requirements for a site safety officer. These measures shall be included within a construction management plan required to be reviewed by all workers.	**No.** Because preparation, regulatory agency review and approval, and implementation of an NPDES permit is required by law, Program EIR Mitigation Measure 4.G-2d is not carried forward into the Specific Plan EIR.	

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	Carry Forward or Modify into Specific Plan EIR?	Mitigation Measures Carried Forward into the Baylands Specific Plan EIR
Routine use, storage, transport, and disposal of hazardous materials	**4.G-2e (Hazardous Materials Business Plan).** Prior to receipt of a Certificate of Occupancy, any business that would handle, store, transport, or dispose of hazardous materials or wastes shall prepare and implement a Hazardous Materials Business Plan (HMBP) that shall include at a minimum, the following components: • Details, including floor plans, of the facility and business conducted at the site; • An inventory of the type and quantity of hazardous materials that are handled or stored onsite; • Spill prevention procedures; • An emergency response plan that provides emergency notification procedures; and • A safety and emergency response training program for new employees with annual refresher courses. The HMBP shall be submitted to and approved by the San Mateo Department of Environmental Health prior to site occupancy.	**No.** Because preparation, regulatory agency review and approval, and implementation of hazardous materials business plans is required by law, Program EIR Mitigation Measure 4.G-2e is not carried forward into the Specific Plan EIR.	
Routine use, storage, transport, and disposal of hazardous materials	**4.G-2f:** Prior to issuance of a building permit for any development within the Project Site, proposed underground utilities and utility vaults located on or within 500 feet of the landfill footprint shall be constructed with soil vapor barriers and constructed of intrinsically safe and/or explosion-proof equipment in accordance with City Building Division requirements and overseeing agency (DTSC or RWQCB) as well as the San Mateo County Environmental Health Division as necessary.	**No.** The provisions of Program EIR Mitigation Measure 4.G-2g have been superseded by legal requirements, including Title 27, which is therefore not carried forward into the Specific Plan EIR.	
Routine use, storage, transport, and disposal of hazardous materials	**4.G-2g:** Prior to issuance of a grading permit, all grading specifications for OU-1 and OU-2 shall be developed in accordance with RWQCB and DTSC requirements regarding soil vapor barriers and incorporated into the final grading plan. Any	**No.** The provisions of Program EIR Mitigation Measure 4.G-2g have been superseded by legal requirements associated with approvals of site remediation plans for OU-SM and OU-2,	

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	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	**Carry Forward or Modify into Specific Plan EIR?**	**Mitigation Measures Carried Forward into the Baylands Specific Plan EIR**
	installation of utilities in areas that have adopted soil capping remediation strategies shall be located above the contaminated soil and groundwater areas in accordance with RWQCB and DTSC requirements. Where gravity and utility force mains require encroachment into contaminated areas, special construction details and mitigation measures shall be developed during the preparation of the final RAPs for OU-1 and OU-2 as approved by the RWQCB and DTSC and in accordance with Soil and Groundwater Management Plans. Final RAPs shall include overseeing agency (DTSC or RWQCB) approved Human Health Risk Assessments which include inhalation risks and are based on proposed land uses.	as well as conditional approval of a final landfill closure plan. This measure is therefore not carried forward into the Specific Plan EIR.	
Routine use, storage, transport, and disposal of hazardous materials	**4.G-2h.** Construction of all new structures within the former landfill footprint and within OU-1 and OU-2, as well as on site areas within 1,000 feet of the waste material footprint, shall incorporate sub-slab vapor barriers to minimize potential vapor intrusion into buildings. Further, all structures built within 1,000 feet of the landfill footprint shall be equipped with automatic combustible gas sensors in sub-floor areas and on the first floor of occupied interior spaces of buildings. A centralized sensor monitoring and recording system shall also be provided. Gas monitoring for trace gases shall be conducted in accordance with the requirements of Title 27, for 30 years or until the operator receives authorization from the local enforcement agency (LEA) and CalRecycle to discontinue monitoring upon demonstration by the operator that there is no potential for trace gas migration into onsite structures.	**No.** The provisions of Program EIR Mitigation Measure 4.G-2g have been superseded by legal requirements associated with approvals of site remediation plans for OU-SM and OU-2, as well as conditional approval of a final landfill closure plan. This measure is therefore not carried forward into the Specific Plan EIR.	
Potential lead contamination on Icehouse Hill from the former shooting range	**4.G-2i:** Prior to any construction of trails on the southerly slope of Icehouse Hill, best management practices for lead removal consistent with United States Environmental Protection Agency Circular EPA-902-B-01-001, *Best Management Practices for*	**Yes.** Program EIR Mitigation Measure 4.G-2i, which sets requirements for remediation of the former police shooting range on Icehouse Hill, is relevant to the Baylands Development	**MM HAZ-1i: Former Police Shooting Range Cleanup (Program EIR Mitigation Measure 4.G-2i).** Prior to any construction of trails on the southerly slope of Icehouse Hill, best management practices for lead removal consistent with United States Environmental

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	**Carry Forward or Modify into Specific Plan EIR?**	**Mitigation Measures Carried Forward into the Baylands Specific Plan EIR**
	Lead at Outdoor Shooting Ranges, Revised June 2005, shall be implemented.	Project and is carried forward from the Program EIR.	Protection Agency Circular EPA-902-B-01-001, *Best Management Practices for Lead at Outdoor Shooting Ranges*, Revised June 2005, shall be implemented. *Reason for revisions to this Program EIR Mitigation Measure:* • *Naming and renumbering this measure are needed for consistency with all mitigation measures contained in this EIR.*
Potential contamination within the Bayshore Industrial Park	**4.G-2j:** Prior to approval of any demolition plan within the Bayshore Industrial Park, any building(s) proposed for demolition shall be tested for asbestos and lead-based paint. Should asbestos or lead-based paint be identified, the affected building(s) shall be remediated to the satisfaction of the RWQCB pursuant to the most current regulatory standards in effect at the time of remediation. Prior to site development within the Bayshore Industrial Park, soils shall be tested for likely constituents of concern based on the site's use pursuant to the requirements of the RWQCB. Human health risk assessment(s) for sites proposed for demolition shall be prepared based on the future uses of the area approved by the City of Brisbane. Should risks to human health be identified, remediation to the risk-based remediation standards set by the RWQCB shall be completed prior to initiating grading or other onsite development.	**No.** The provisions of Program EIR Mitigation Measure 4.G-2g have been superseded by legal requirements and is therefore not carried forward into the Specific Plan EIR.	
Locating a school site within 0.25 mile of the Kinder Morgan site	**4.G-3:** Grade K–12 school facilities constructed on the Project Site shall not be located within 0.25 miles of a facility with hazardous emissions or that handles hazardous or acutely hazardous materials, substances or waste, unless approved by School Facilities Planning Division of the California Department of Education in conformance with California Code of Regulations (CCR) Title 5, Section	**Yes.** Because a middle school is proposed within the Baylands, Program EIR Mitigation Measure 4.G-3 is relevant to proposed Baylands development and is carried forward into the Specific Plan EIR.	**MM HAZ-2: Protection of School Facilities (Program EIR Mitigation Measure 4.G-3).** Grade K–12 school facilities constructed ~~on the Project Site~~ within the Baylands shall not be located within 0.25 miles of a facility with hazardous emissions or that handles hazardous or acutely hazardous materials, substances or waste, unless approved by School Facilities Planning Division of the California Department of Education in conformance with California Code of Regulations (CCR) Title 5, Section 14010, which sets

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	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	Carry Forward or Modify into Specific Plan EIR?	Mitigation Measures Carried Forward into the Baylands Specific Plan EIR
	14010, which sets forth California Department of Education criteria for school site locations: • "If the proposed [school] site is within 1,500 feet of a railroad track easement, a safety study shall be done by a competent professional trained in assessing cargo manifests, frequency, speed, and schedule of railroad traffic, grade, curves, type and condition of track need for sound or safety barriers, need for pedestrian and vehicle safeguards at railroad crossings, presence of high pressure gas lines near the tracks that could rupture in the event of a derailment, preparation of an evacuation plan. In addition to the analysis, possible and reasonable mitigation measures must be identified in accordance the referenced code." California Code of Regulations (CCR) Title 5, Section 14010 (d) • "The [school] site shall not be located near an above-ground water or fuel storage tank or within 1,500 feet of the easement of an above ground or underground pipeline that can pose a safety hazard as determined by a risk analysis study, conducted by a competent professional, which may include certification from a local public utility commission." CCR Title 5, Section 14010 (h): Grade K–12 school facilities shall also comply with California Education Code Sections 17210 through 17224 and related statutory provisions related to risk to human health or the environment at proposed school properties as overseen by the Department of Toxic Substances Control (DTSC). In accordance with California Education Code Sections 17210 through 17224 and related statutory provisions, the school district must prepare a Phase I Environmental Site Assessment and/or a Preliminary Endangerment Assessment (PEA) to		forth California Department of Education criteria for school site locations: • "If the proposed [school] site is within 1,500 feet of a railroad track easement, a safety study shall be done by a competent professional trained in assessing cargo manifests, frequency, speed, and schedule of railroad traffic, grade, curves, type and condition of track need for sound or safety barriers, need for pedestrian and vehicle safeguards at railroad crossings, presence of high pressure gas lines near the tracks that could rupture in the event of a derailment, preparation of an evacuation plan. In addition to the analysis, possible and reasonable mitigation measures must be identified in accordance the referenced code." California Code of Regulations (CCR) Title 5, Section 14010 (d) • "The [school] site shall not be located near an above-ground water or fuel storage tank or within 1,500 feet of the easement of an above ground or underground pipeline that can pose a safety hazard as determined by a risk analysis study, conducted by a competent professional, which may include certification from a local public utility commission." CCR Title 5, Section 14010 (h) Grade K–12 school facilities shall also comply with California Education Code Sections 17210 through 17224 and related statutory provisions related to risk to human health or the environment at proposed school properties as overseen by the Department of Toxic Substances Control (DTSC). In accordance with California Education Code Sections 17210 through 17224 and related statutory provisions, the school district must prepare a Phase I Environmental Site Assessment and/or a Preliminary Endangerment Assessment (PEA) to identify potential contamination and evaluate whether it presents a risk to human

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
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	identify potential contamination and evaluate whether it presents a risk to human health or the environment at proposed school properties as overseen by the Department of Toxic Substances Control (DTSC). The environmental investigation and any required remediation of properties to be developed for use as schools shall be overseen by DTSC in coordination with the California Department of Education and the School Facilities Planning Division. Final design plans shall be approved by the School Facilities Planning Division of the California Department of Education prior to commencement of construction. All required remediation within 0.25 miles of a proposed K–12 school site within the Project Site shall be completed prior to occupancy of the school.		health or the environment at proposed school properties as overseen by the Department of Toxic Substances Control (DTSC). The environmental investigation and any required remediation of properties to be developed for use as schools shall be overseen by DTSC in coordination with the California Department of Education and the School Facilities Planning Division. Final design plans shall be approved by the School Facilities Planning Division of the California Department of Education prior to commencement of construction. All required remediation within 0.25 miles of a proposed K–12 school site within the ~~Project Site~~ Specific Plan area shall be completed prior to occupancy of the school. *Reasons for revisions to this Program EIR Mitigation Measure:* • *Renumbering this measure is needed for consistency with all mitigation measures contained in this EIR.* • *Because the term "on the Project Site" now encompasses more area than was addressed in the Program EIR, the reference has been modified to "within the Baylands" to reflect the original intent of the mitigation measure.*

1. Hydrology and Water Quality

Table 4.21-10: Program EIR Hydrology and Water Quality Mitigation Measures

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	**Carry Forward or Modify into Specific Plan EIR?**	**Mitigation Measures Carried Forward into the Baylands Specific Plan EIR**
Compliance with water quality standards during construction	**4.H-1a:** Prior to issuance of a grading permit, an applicant for any site specific development project to be constructed within the Project Site shall (1) file a Notice of Intent to the RWQCB to comply with the statewide General Permit for Discharges of Storm Water Associated with Construction Activities and shall prepare and implement a site-specific SWPPP for construction activities on the Project Site in accordance with the NPDES General Construction Permit and (2) demonstrate compliance with the City of Brisbane's Municipal Regional Stormwater Permit Order No. 2011-0083 Provision C.3. The site-specific SWPPP shall include all provisions of the Erosion and Sediment Control Plan submitted as part of grading and construction permits. In addition to meeting the regulatory requirements for the SWPPP, the site-specific SWPPP shall include provisions for the minimization of sediment disturbance (i.e., production of turbidity) and release of chemicals to the Bay.	**No.** Compliance with the statewide General Permit for Discharges of Storm Water Associated with Construction Activities, as well as preparation and implementation of site-specific SWPPPs for Baylands construction activities is required by law. Program EIR Mitigation Measure 4.H-1a is therefore not carried forward into the Specific Plan EIR.	
Compliance with water quality standards during construction	**4.H-1b:** Prior to issuance of a grading permit, an applicant for any site-specific development project to be constructed within the Project Site shall comply with any site-specific NPDES permit requirements for dewatering activities, as administered by the RWQCB. The RWQCB could require compliance with certain provisions in the permit, such as treatment of the flows prior to discharge, depending on the particular site conditions. Discharge of the groundwater generated during dewatering to the sanitary sewer or storm drain system shall only occur with authorization of and required permits from the applicable regulatory agencies, including the Bayshore Sanitary District or the RWQCB. Site	**No.** Because compliance with legal requirements would result in less than significant impacts, and the Program EIR Mitigation Measure 4.H-1b reflects those requirements, it is not carried forward into the Specific Plan EIR.	

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	**Carry Forward or Modify into Specific Plan EIR?**	**Mitigation Measures Carried Forward into the Baylands Specific Plan EIR**
	dewatering activities shall also be monitored by a state licensed geotechnical engineer in such a manner as to avoid the potential for damaging buildings or infrastructure due to potential subsidence of the ground surface in accordance with any requirements from the City Engineer.		
Compliance with water quality standards during construction	**4.H-1c.** Applicants for site-specific development projects to be constructed within the Project Site shall prepare and implement a Final Stormwater Management Plan (SMP) in accordance with the most recent NPDES C.3 requirements to be reviewed and approved by the City Engineer prior to approval of final design plans. The SMP shall be prepared by licensed professionals and act as the guiding document detailing best management practices for mitigating water quality impacts in the post-construction phase. Industrial uses shall prepare a SMP in accordance with NPDES permit requirements for Industrial Activity. Industrial applicants shall include management measures that will achieve the performance standard of best available technology economically achievable and best conventional pollutant control technology in accordance with the General Industrial Permit as approved by the RWQCB and shall demonstrate compliance within an annual report be submitted each July 1. The SMP shall provide operations and maintenance guidelines for all of the BMPs identified in the SMP, including LID measures and other BMPs designed to mitigate potential water quality degradation of runoff from all portions of the completed development, and shall clearly identify the entity responsible for the required ongoing maintenance. The SMP shall be developed in conjunction with the Storm Drain Master Plan to ensure that the treatment designs support the hydraulics and hydrology of the proposed storm drainage system.	**No.** Because compliance with legal requirements, including preparation and implementation of a Final Stormwater Management Plan (SMP) in accordance with the most recent NPDES C.3 requirements would result in a less than significant impact, Program EIR Mitigation Measure 4.H-1c is not carried forward into the Specific Plan EIR.	

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	**Carry Forward or Modify into Specific Plan EIR?**	**Mitigation Measures Carried Forward into the Baylands Specific Plan EIR**
Increase in the amount of runoff and potential flooding.	**4.H-4a:** Prior to issuance of a building permit, all site-specific development plans within the Project Site shall include systemwide drainage improvements that shall accommodate all increased runoff in accordance with City requirements and correct known existing deficiencies (e.g., Levinson Overflow Area and the PG&E property). On-site storm drainage collection facilities shall be sized to convey the peak flow rate from a 25-year storm event entirely within the piping system such that Baylands roadways and recreational facilities are not flooded. Drainage improvements shall accommodate the 100-year peak storm event within the piping system and within streets such that building finished floor elevations provide a minimum of 1-foot of freeboard above the 100-year storm event hydraulic grade line water elevation with tidal flow and 100 years of estimated sea level rise. Key roadways including Sierra Point Parkway, Lagoon Road, and Tunnel Avenue shall be designed such that these roadways are available as evacuation routes in the event of a 100-year storm event. The proposed system design shall be submitted to the City Engineer for approval and shall hydraulically isolate existing drainage inlets fronting Levinson Overflow Area and the PG&E property from existing Brick Arch Sewer system.	**Yes.** Program EIR Mitigation Measure 4.H-4a, which sets performance standards for flood protection, is relevant to the proposed Specific Plan and is therefore carried forward into the Specific Plan EIR.	**MM HWQ-3a: Known Drainage Deficiencies (Program EIR Mitigation Measure 4.H-4a).** Prior to issuance of a building permit, all site-specific development plans within the ~~Project Site~~ Baylands shall include systemwide drainage improvements that shall accommodate all increased runoff and correct the Project's incremental additional impact to flood risks to areas with ~~known~~ existing deficiencies (e.g., Levinson Overflow Area and the PG&E property): • On-site storm drainage collection facilities shall be sized to convey the peak flow rate from a 25-year storm event entirely within the piping system such that Baylands roadways and recreational facilities are not flooded. • Drainage improvements shall accommodate the 100-year peak storm event within the piping system and within streets such that building finished floor elevations provide a minimum of 1 foot of freeboard above the 100-year storm event hydraulic grade line water elevation with tidal flow and ~~100 years of estimated~~ Year 2100 projected sea level rise. • Key roadways including Sierra Point Parkway, Lagoon Road, and Tunnel Avenue shall be designed such that these roadways are available as evacuation routes in the event of a 100-year storm event. The proposed system design shall be submitted to the City Engineer for approval and shall hydraulically isolate existing drainage inlets fronting the Levinson Overflow Area and the PG&E property from the existing Brick Arch Sewer system. *Reasons for revisions to this Program EIR Mitigation Measure:*

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	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	**Carry Forward or Modify into Specific Plan EIR?**	**Mitigation Measures Carried Forward into the Baylands Specific Plan EIR**
			• *Renumbering and adding a title to this measure is needed for consistency with all mitigation measures contained in this EIR.* • *Because the term "Project site" now includes offsite lands not analyzed in the Program EIR, references have been revised to "Baylands," consistent with the original intent of this measure.* • *The measure has been revised to require mitigation of existing known drainage deficiencies to be proportional to the project's impacts.* • *Sea level rise terminology has been updated to reflect the states most recent guidance (2024).*
Increase in the amount of runoff and potential flooding.	**4.H-4b:** Prior to issuance of a building permit, all site-specific development plans within the Project Site shall include additional conveyance capacity by incorporating new storm drain facilities along Bayshore Boulevard north of Industrial Avenue. Development plans shall also require the addition of a new inlet near the Bayshore Boulevard and Industrial Way intersection that is large enough to intercept surface flows from Levinson Overflow Area and the PG&E property in accordance with and as approved by the City. Review and approval by the City engineer shall be required to confirm that conveyance capacity is sufficient to accommodate the 100-year peak storm event within the piping system and streets such that building finished floor elevations provide a minimum of 1-foot of freeboard above the 100-year storm event hydraulic grade line water elevation with tidal flow and 100 years of estimated sea level rise.	**Yes.** Program EIR Mitigation Measure 4.H-4b, which requires flood protection improvements, is relevant to the proposed Specific Plan and is therefore carried forward into the Specific Plan EIR.	**MM HWQ-3b: Bayshore Boulevard Drainage (Program EIR Mitigation Measure 4.H-4b).** Prior to issuance of a building permit, all site-specific development plans within the ~~Project Site~~ Baylands shall include additional conveyance capacity by incorporating new storm drain facilities along Bayshore Boulevard north of Industrial Avenue. Development plans shall also require addition of a new inlet near the Bayshore Boulevard and Industrial Way intersection that is large enough to intercept surface flows from Levinson Overflow Area and the PG&E property in accordance with and as approved by the City. Review and approval by the City Engineer shall be required to confirm that conveyance capacity is sufficient to accommodate the 100-year peak storm event within the piping system and streets such that building finished floor elevations provide a minimum of 1-foot of freeboard above the 100-year storm event hydraulic grade line water elevation with tidal flow and ~~100 years of estimated~~ Year 2100 projected sea level rise.

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	**Carry Forward or Modify into Specific Plan EIR?**	**Mitigation Measures Carried Forward into the Baylands Specific Plan EIR**
			Reasons for revisions to this Program EIR Mitigation Measure: • *Renumbering and adding a title to this measure is needed for consistency with all mitigation measures contained in this EIR.* • *Because the term "Project site" now includes offsite lands not analyzed in the Program EIR, references have been revised to "Baylands," consistent with the original intent of this measure.* • *Sea level rise terminology has been updated to reflect the states most recent guidance (2024).*
Increase in the amount of runoff and potential flooding	**4.H-4c:** Prior to issuance of a building permit, all development plans in the Baylands shall include conveyance improvements to existing Visitacion Creek in the final drainage plan design and extend it further west of Tunnel Road to the Roundhouse area as approved by the City and in accordance with Army Corps of Engineers and California Department of Fish and Wildlife requirements. Improvements to tidal portions of Visitacion Creek will be made in accordance with requirements stipulated in permits from the BCDC. Project Site development and infrastructure design shall also incorporate a detention zone within the newly extended channel. Project Site development shall remove the existing Timber Box Culvert between Tunnel Road and the Caltrain mainline tracks and replace it with an open channel system prior to Project site development completion. The design shall accommodate increases in peak runoff during 100-year design storm event with tidal flow, and with consideration of estimated sea level rise over the next century and provide protection of new structures for human occupancy from the 100-year design storm event throughout and after Project Site development.	**No.** Due to changes in proposed Baylands development, Program EIR Mitigation Measure is no longer relevant and is therefore not carried forward into the Specific Plan EIR.	

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	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	**Carry Forward or Modify into Specific Plan EIR?**	**Mitigation Measures Carried Forward into the Baylands Specific Plan EIR**
Urban pollutants in stormwater runoff	**4.H-5:** Prior to issuance of an occupancy permit for site-specific development within the Project Site, an integrated pest management plan shall be prepared and implemented, subject to City review and approval, to set forth a preventative, long-term, low toxicity program to control pests. The plan shall provide guidelines for landscape and building maintenance with the emphasis on minimizing the use of pesticides while controlling pests. At a minimum, the integrated pest management plan shall include: • ***Identification of acceptable pest levels*** (action thresholds) with an emphasis on *control*, not *eradication*, identifying site and pest specific action thresholds, and the controls to be used if those thresholds are exceeded. • ***Preventive practices:*** Design, construction, and maintenance of landscape facilities, and buildings, as well as operation of uses that prevent or minimize pest problems. • ***Monitoring:*** Regular observation, including inspection and identification. • ***Mechanical controls:*** Should a pest reach an unacceptable level, provide for mechanical methods as the first options, including simple hand-picking, erecting insect barriers, using traps, vacuuming, and tillage to disrupt breeding. • ***Biological Controls:*** Provide for use of natural biological processes and materials for control, including promoting beneficial insects that prey on target pests and biological insecticides derived from naturally occurring microorganisms. • ***Responsible Pesticide Use:*** Provide for use of synthetic pesticides generally only as required when preferred methods are infeasible or ineffective, including use of the least toxic	**Yes.** Program EIR Mitigation Measure 4.H-5, which establishes integrated pest management requirements, is relevant to the proposed Specific Plan and is therefore carried forward into the Specific Plan EIR.	**MM HWQ-1: Integrated Pest Management (Program EIR Mitigation Measure 4.H-5).** Prior to issuance of an occupancy permit for site-specific development within the ~~Project Site~~ Baylands, an integrated pest management plan shall be prepared and implemented, subject to City review and approval, to set forth a preventative, long-term, low toxicity program to control pests. The plan shall provide guidelines for landscape and building maintenance with the emphasis on minimizing the use of pesticides while controlling pests. At a minimum, the integrated pest management plan shall include: • ***Identification of acceptable pest levels*** (action thresholds) with an emphasis on *control*, not *eradication*, identifying site and pest specific action thresholds, and the controls to be used if those thresholds are exceeded. • ***Preventive practices:*** Design, construction, and maintenance of landscape facilities, and buildings, as well as operation of uses that prevent or minimize pest problems would include integrated pest management strategies, sanitation practices, and proactive maintenance to minimize pest infestations. • ***Monitoring:*** Regular observation, including inspection and identification. • ***Mechanical controls:*** Should a pest reach an unacceptable level, provide for mechanical methods as the first options, including include simple hand-picking, erecting insect barriers, using traps, vacuuming, and tillage to disrupt breeding. • ***Biological Controls:*** Provide for use of natural biological processes and materials for control, including promoting beneficial insects that prey

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	**Carry Forward or Modify into Specific Plan EIR?**	**Mitigation Measures Carried Forward into the Baylands Specific Plan EIR**
	pesticide that will do the job and is the safest for other organisms and for air, soil, and water quality; use of pesticides in bait stations rather than sprays; or spot-spraying rather than general application.		on target pests and biological insecticides derived from naturally occurring microorganisms. • ***Responsible Pesticide Use:*** Provide for use of synthetic pesticides generally only as required when preferred methods are infeasible or ineffective, including use of the least toxic pesticide that will do the job and is the safest for other organisms and for air, soil, and water quality; use of pesticides in bait stations rather than sprays; or spot-spraying rather than general application. *Reasons for revisions to this Program EIR Mitigation Measure:* • *Renumbering and adding a title to this measure is needed for consistency with all mitigation measures contained in this EIR.* • *Because the term "Project site" now includes offsite lands not analyzed in the Program EIR, references have been revised to "Baylands," consistent with the original intent of this measure.* • *The text added text to the second bullet point is intended to clarify the original meaning of identifying "preventative practices."*
Sea level rise	**4.H-8:** Concurrent with submittal of development applications, site-specific development projects within the area south of the proposed Geneva extension shall submit design plans along with a Sea Level Rise Risk Assessment Report to the City. Site specific development projects within the portion of the Project Site under BCDC jurisdiction shall submit design plans and a Sea Level Rise Risk Assessment Report to BCDC in accordance with the most current San Francisco Bay Plan policies. Site-specific development within the Project Site shall incorporate protection measures that demonstrate ability to handle the flood levels expected by mid-century in	**No.** Sea level rise risk assessments have been prepared as part of the Specific Plan and EIR. Submittal, review, and approval by BCDC of design plans within areas subject to BCDC jurisdiction is required as is compliance with BCDC regulations. Program EIR Mitigation Measure 4.H-8 is therefore not carried forward into the Specific Plan EIR.	

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	Carry Forward or Modify into Specific Plan EIR?	Mitigation Measures Carried Forward into the Baylands Specific Plan EIR
	accordance with the San Francisco Bay Plan. Any BCDC requirements after review of the Sea Level Rise Risk Assessment report shall also be incorporated into Project design prior to issuance of a building permit. Sea level rise analyses shall be based on the California Climate Action Team's sea level rise projections for the West Coast, unless otherwise substantiated to the satisfaction of BCDC. For site-specific development projects within the area subject to BCDC jurisdiction, discretionary permits from the City such as grading or building permits shall be obtained prior to final approval of the BCDC permit.		

m. Geology, Soils, and Seismicity

Table 4.21-11: Program EIR Geology, Soils, and Seismicity Mitigation Measures

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	**Carry Forward or Modify into Specific Plan EIR?**	**Mitigation Measures Carried Forward into the Baylands Specific Plan EIR**
Exposure of people and structures to strong seismic groundshaking	**4.E-2a:** Prior to the issuance of a grading permit, applicants for all site-specific development and infrastructure projects within the Project Site, including structures, utilities, and roadways shall submit to the City Engineer a final design-level geotechnical report prepared by a licensed geotechnical or soil engineer experienced in construction methods on fill materials in an active seismic area. The report shall provide site-specific construction methods and recommendations regarding grading activities, fill placement, soil corrosivity/expansion/erosion potential, compaction, foundation construction, drainage control (both surface and subsurface), and avoidance of settlement, liquefaction, differential settlement, spread of leachate outside of the former landfill, and seismic hazards in accordance with current California Building Code requirements including Chapter 16, Section 1613. The report shall also require that all subsurface improvements such as utilities that include any materials susceptible to corrosive effects would be engineered in conformance with the most recently adopted California Building Code requirements including the use of engineered backfill. The report shall also include stability analyses of final design cut and fill slopes, including recommendations for avoidance of slope failure(s). The final grading plan and associated development elements including the landfill cap layer shall be designed and constructed in accordance with requirements of the final design-level geotechnical investigation as approved by the City Engineer prior to the issuance of any building permits. Designers and contractors shall comply with recommendations of the design-level geotechnical investigation during project construction including any modifications required by the City Engineer. A licensed geotechnical or soil engineer shall monitor earthwork and construction activities to ensure that	**No.** Because the requirements set forth in Program EIR Mitigation Measure 4.E-2a are required by law, impacts related to seismic groundshaking would be less than significant, and this measure need not be carried forward into the Specific Plan EIR.	

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	**Carry Forward or Modify into Specific Plan EIR?**	**Mitigation Measures Carried Forward into the Baylands Specific Plan EIR**
	recommended site-specific construction methods are followed during Project construction. These recommendations shall be incorporated into all development plans submitted and approved for the Project Site development as conditions of approval.		
Exposure of people and structures to strong seismic groundshaking	**4.E-2b:** To address recovery from damage to future structures and to the landfill itself that may be caused by future earthquakes, a Post-Earthquake Inspection and Corrective Action Plan (Plan) for the site-specific development projects within the former landfill portion of the Project Site shall be prepared and implemented by all Project applicants in accordance with Title 27 landfill closure requirements as approved by the RWQCB and the San Mateo County Department of Environmental Health prior to issuance of a building permit. The plan shall be implemented in the event of a magnitude 7.0 or greater earthquake centered within 30 miles of the former Brisbane Landfill. Results of the inspection of containment features and groundwater and leachate control facilities potentially affected by any static or seismic deformations of the landfill shall be reported to the RWQCB within 72 hours of the event. Immediately following an earthquake event causing damage to the landfill structures, the Plan shall be implemented and the RWQCB notified of any damage. Plan activities following a triggering event shall include assessing perimeter dikes and shoreline erosion protection measures, the surface locations of underground utilities, landfill cover including roads and parking areas, groundwater monitoring systems, leachate monitoring systems, and surface-water drainage and outlet facilities. Any restorative measures as required under Order 01-041 shall be implemented in accordance with RWQCB requirements.	**No.** Because the requirements set forth in Program EIR Mitigation Measure 4.E-2b are required by law, impacts related to seismic groundshaking would be less than significant, and this measure need not be carried forward into the Specific Plan EIR.	
Seismic related ground failure	**4.E-3:** The final design-level geotechnical investigation recommended in Mitigation Measure 4.E-2a above, to be prepared by a licensed professional and submitted to the City for review and approval, shall address liquefaction potential. The geotechnical investigation shall include	**No.** Because the requirements set forth in Program EIR Mitigation Measure 4.E-3 are required by law, impacts related to seismic-related ground failure	

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	**Carry Forward or Modify into Specific Plan EIR?**	**Mitigation Measures Carried Forward into the Baylands Specific Plan EIR**
	recommendations for foundation design to address site-specific potential liquefaction issues. The recommendations of the investigation shall be in accordance with the most recent California Building Code requirements for building design and incorporated into all development plans submitted for the Project Site development. All final design and engineering plans submitted by the applicant shall be subject to review and approval by the City of Brisbane Building Official.	would be less than significant, and this measure need not be carried forward into the Specific Plan EIR.	
Slope stability	**4.E-4a:** Site-specific development projects within the Project Site shall not place new fill materials within 600 feet of Brisbane Lagoon, except when required for roadway improvements, habitat enhancement, or other approved site improvements. Placement of new fill materials within 600 feet of the Brisbane Lagoon shall be designed to prevent erosion of soils into the lagoon during and subsequent to construction. All manufactured slopes shall require certification by a licensed geotechnical engineer to the satisfaction of the City Engineer that a factor of safety of at least 1.5 for static conditions and 1.2 under dynamic conditions will be achieved.	**Yes.** Program EIR Mitigation Measure 4.E-4a, which addresses stability of Bay Mud soils within 600 feet of the lagoon's north shore, is relevant to the current Specific Plan project and is carried forward into the Specific Plan EIR.	**MM GEO-4a: Manufactured Slopes (Program EIR Mitigation Measure 4.E-4a).** Site-specific development projects within the ~~Project Site~~ Baylands shall not place new fill materials within 600 feet of Brisbane Lagoon, except when required for roadway improvements, habitat enhancement, recreational facilities, or other ~~approved~~ site improvements permitted by the Specific Plan. Placement of new fill materials within 600 feet of the Brisbane Lagoon shall be designed to prevent erosion of soils into the lagoon during and subsequent to construction. All manufactured slopes shall require certification by a licensed geotechnical engineer to the satisfaction of the City Engineer that a factor of safety of at least 1.5 for static conditions and 1.2 under dynamic conditions will be achieved. *Reason for revisions to this Program EIR Mitigation Measure:* • *Renumbering and adding a title to this measure is needed for consistency with all mitigation measures contained in this EIR.* • *Because the term "Project site" encompasses an area larger than the Baylands, revisions were needed to focus implementation of this measure on the physical area affected by the impact that requires mitigation consistent with the original*

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	**Carry Forward or Modify into Specific Plan EIR?**	**Mitigation Measures Carried Forward into the Baylands Specific Plan EIR**
			intent of Program EIR Mitigation Measure 4.E-4a. • *Addition of the term "recreational facilities" confirms that the recreational components of Lagoon Park are, in fact, "approved site improvements."* • *Replacement of "other approved site improvements" with "other site improvements permitted by the Specific Plan" clarifies the original intent of the mitigation measure and ties "other improvements" to the Specific Plan as approved by the City.*
Slope stability	**4.E-4b:** Site-specific development projects within the Project Site shall comply with Brisbane General Plan policy requirements and the most recent California Building Code requirements for slope stability, including Chapters 16 and 18 that require geotechnical investigations. The recommendations of the investigation shall be in accordance with the most recent California Building Code requirements for building design and incorporated into all development plans submitted for Project Site development. All final design and engineering plans submitted by the Project applicant shall be subject to review and approval by the City of Brisbane Building Official prior to issuance of a building permit.	**No.** Because the requirements set forth in Program EIR Mitigation Measure 4.E-3 are required by law, impacts related to slope stability would be less than significant, and this measure need not be carried forward into the Specific Plan EIR.	

n. Utilities, Service Systems, and Water Supply

Table 4.21-12: Program EIR Utilities, Service Systems, and Water Supply Mitigation Measures

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	Carry Forward or Modify into Specific Plan EIR?	Mitigation Measures Carried Forward into the Baylands Specific Plan EIR
Adequate local water storage	**4.O-1a:** The City shall issue building permits for habitable structures only after it determines that sufficient water storage is available and connected to the Project Site's water delivery system. Water storage facilities shall be constructed either by the Brisbane Baylands developer or by the City, as mutually agreed. Should the City construct facilities, site-specific development projects shall reimburse the City for their fair share of costs, as determined by the City of Brisbane Public Works Department, for the development of water storage to provide fire flows and peak daily water demands to serve Project Site development. Prior to issuance of the first permit of occupancy, site-specific development projects shall verify the availability of adequate water storage capacity to provide fire flows and meet peak daily water demands to serve Project Site development. Each required specific plan for development within the Project Site shall include this mitigation measure as a requirement for future development.	**No.** The 2025 Specific Plan project includes on-site water storage facilities that would be constructed and maintained by the California Water Company.	
Biological resources impacts of water diversions along the Tuolumne River	**4.O-1b: Controlled Releases to Recharge Groundwater in Streamside Meadows and Other Alluvial Deposits.** In any year during which the SFPUC determines that controlled releases of water from Hetch Hetchy Reservoir are required to sustain existing meadow vegetation within the Poopenaut Valley, Brisbane shall contribute a percentage of the water it purchases from OID to the SFPUC to augment the controlled releases from Hetch Hetchy Reservoir. The City's contribution shall be in proportion to the amount of water required for controlled releases by the SFPUC in any given year that such releases are needed and shall be in an amount sufficient to ensure that impacts to meadows resulting from the proposed OID-Brisbane water transfer are reduced to less than significant. Prior to the City's approval of a water supply agreement with OID, the formula for determining Brisbane's required contribution to the SFPUC shall be determined in consultation with the SFPUC. That formula shall be included in the City's agreement with the SFPUC to transport and store the water purchased from OID.	**No.** Program EIR Mitigation Measure 4.O-1b is specific to the acquisition of water supply from the Oakdale Irrigation District, which is no longer proposed.	

o. Public Services and Facilities

Table 4.21-13: Program EIR Public Services and Facilities Measures

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	**Carry Forward or Modify into Specific Plan EIR?**	**Mitigation Measures Carried Forward into the Baylands Specific Plan EIR**
Increased demand for police services	**4.L-1:** A site for a storefront substation that is easily visible and accessible to the general public and sized large enough to accommodate operations described in the Police Services and Facilities Plan shall be provided as required by the Brisbane Police Department.	**No.** The Police Services and Facilities Plan required by this mitigation measure has been prepared and will be implemented as part of the Baylands planning review process.	
Increased demand for school facilities	**4.L-3:** A site for an elementary/middle school of sufficient size to accommodate development-related enrollment shall be reserved as part of the specific plan required by the Brisbane General Plan for development within the Project Site.	**No.** The proposed on-site middle school and conversion to the existing Bayshore school to an elementary school implements this mitigation measure.	
Increased demand for library facilities	**4.L-4:** To avoid existing and proposed library facilities in surrounding communities, a library facility shall be developed within the Project Site that is of sufficient size to serve Project Site population. The onsite library shall be constructed and operational prior to issuance of the occupancy permits for more than 50 percent of the residential dwelling units permitted under the DSP and DSP-V scenarios, thereby ensuring an onsite resident population to use onsite library facilities at the time of its opening. This requirement shall be reflected in the specific plan(s) required to be prepared and approved prior to Project Site development.	**Yes.** Because the Specific Plan did not make provision for library facilities, Program EIR Mitigation Measure 4.L-4 remains relevant to the proposed project and will be carried forward into the Specific Plan EIR.	**MM PUB-1a: On-Site Library (Program EIR Mitigation Measure 4.L-4).** To avoid overuse of existing and proposed library facilities ~~in surrounding communities~~, a library facility shall be developed within the ~~Project Site~~ Baylands that is of sufficient size to serve ~~Project Site~~ the Specific Plan's population. The on-site library shall be constructed and operational prior to issuance of the occupancy permits for more than 50 percent of the residential dwelling units permitted ~~under the DSP and DSP-V scenarios~~ by the Specific Plan, thereby ensuring an on-site resident population at the time of its opening. ~~This requirement shall be reflected in the specific plan(s) required to be prepared and approved prior to Project Site development.~~ *Reason for revisions to this Program EIR Mitigation Measure:* • *Renumbering and adding a title to this measure is needed for consistency with all mitigation measures contained in this EIR.*

Significant Impact Being Mitigated	PROGRAM EIR		SPECIFIC PLAN EIR
	Mitigation Measures Adopted in the Program EIR Mitigation Monitoring and Reporting Program	Carry Forward or Modify into Specific Plan EIR?	Mitigation Measures Carried Forward into the Baylands Specific Plan EIR
			• *Because the term "Project site" encompasses an area larger than the Baylands, revisions were needed to focus implementation of this measure on the physical area affected by the impact that requires mitigation consistent with the original intent of Program EIR Mitigation Measure 4.L-4.* • *Text in the Program EIR mitigation measure regarding future specific plan(s) is no longer needed.*

p. Recreational Resources

No Recreational Resources mitigation measures were proposed in the Program EIR.

q. Wildland Fire

No Wildland Fire mitigation measures were proposed in the Program EIR.

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CHAPTER 5 IRREVERSIBLE ENVIRONMENTAL EFFECTS

5.1 INTRODUCTION

Section 15126.2(d) of the California Environmental Quality Act (CEQA) Guidelines requires environmental impact reports (EIRs) to evaluate the potential for significant irreversible environmental changes to result from proposed projects as follows:

> *Significant Irreversible Environmental Changes Which Would be Caused by the Proposed Project Should it be Implemented. Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.*

Determining whether a project could result in significant and irreversible effects thus requires a determination of whether key resources would be degraded or destroyed in such a way that there would be little possibility of restoring them.

5.2 CHANGES IN LAND USE THAT WOULD COMMIT FUTURE GENERATIONS

The Brisbane General Plan, as amended by General Plan Amendments GP-1-18 and GP-1-19, serves as the City of Brisbane's principal land use planning and policy document, providing guidance for Baylands development. General Plan Amendment GP-1-18, confirmed by Brisbane voters as Measure JJ in 2018, and General Plan Amendment GP-1-19 provide for development of the Baylands with 1,800 to 2,200 dwelling units, 6.5 million square feet of commercial/office development, and an additional 500,000 square feet of hotel use. A minimum of 25 percent of the Baylands' upland area is required to be preserved in open space use uses accessible to the public.

Development permitted by the Baylands Specific Plan would constitute a permanent commitment of the land within the Baylands that would be physically altered to support residential, commercial, office, hotel, habitat restoration, and open space and recreational uses. Given the existing marginal uses within the Baylands, presence of contaminated groundwater and soils in the western portion of the site requiring remediation, and the former Brisbane landfill in the eastern portion of the site requiring final closure in compliance with state law, it is unreasonable to anticipate that circumstances could arise that would justify the return of the land to its current condition following development permitted by the Specific Plan.

5.3 CONSUMPTION OF NON-RENEWABLE RESOURCES

5.3.1 CONSTRUCTION MATERIALS

Nonrenewable resources, such as natural gas, petroleum products and fossil fuels, asphalt, petrochemical-based construction materials, steel, copper, other metals, and sand and gravel, are commodities with a finite supply that are used in development projects such as those that would be allowed by the Baylands Specific Plan. To varying degrees, these materials are readily available and some, such as asphalt, sand, and gravel, are abundant. During construction of buildings and infrastructure, a variety of natural resources would be consumed, including water,[377] sand and gravel, asphalt, petrochemical-based construction materials, steel, copper, and other metals as well as other slowly renewable resources such as lumber and other forest products.

With regard to building materials, future site-specific residential and non-residential developments would be constructed with durable materials having a substantial lifespan, such as cast-in-place concrete, precast concrete, and structural steel, which would improve building longevity. As such, even though construction would result in the commitment of building materials, the materials would not be expected to require replacement during the operational lifespan of Baylands buildings. Once used, these materials would be "lost" for subsequent or alternative use and/or committed to the Baylands site on a long-term basis.

Construction and demolition waste would be generated during site clearance and demolition activities, grading, street and utilities construction, building construction, and installation of landscaping and irrigation systems. Construction and demolition wastes would include vegetation, non-hazardous earth materials, concrete, wood, metals, and other miscellaneous debris (e.g., cardboard, paper, plastic, trash from existing businesses, food wastes). Compliance with City of Brisbane source reduction and recycling requirements for construction projects would minimize the amount of renewable and non-renewable construction and demolition wastes that would be generated and require transport to landfills during site construction. EIR Mitigation Measure PUB-1 requires site development to implement zero waste programs that are, at a minimum, equivalent to San Francisco's zero waste program provided by Recology.

Furthermore, if future buildings constructed within the Baylands were to be demolished after the end of their lifespan, City of Brisbane Municipal Code requirements would ensure that building materials are recycled.

[377] Water will also be consumed during site grading activities. Construction-related water consumption estimates are provided in Section 4.16, *Utilities, Service Systems, and Water Supply*.

5.3.2 FOSSIL FUELS

During construction, fossil fuels would be used both on-site and off-site by workers traveling to and from the site, construction equipment, and delivery vehicles. Once consumed, those fossil fuels will be unavailable for subsequent or alternative uses. Following construction, fossil fuels would be consumed by Baylands residents, workers, and visitors traveling to and from the site, as well as by delivery vehicles.

The vehicles that would travel to and from future Baylands development would include an increasing proportion of electric vehicles. Fossil fuel-based internal combustion vehicles would also be subject to increasingly stringent emissions standards over time, which would reduce the amount of fossil fuel consumed per vehicle (see Section 4.11, *Energy Resources*, for details). Furthermore, the Baylands Specific Plan includes provisions that support decreased use of personal vehicles and increased use of transit, walking, and bicycling. As documented in Section 4.8, *Transportation*, per service population vehicle miles traveled is projected to be substantially less for Baylands development than the San Francisco Bay Area average.

Even though on-site Baylands development will be energy neutral, long-term energy consumption of fossil fuels related to transportation, water delivery, and the production of consumable goods will continue. The amount of fossil fuel that would be consumed during and after Baylands construction has been estimated and can be found in Section 4.11, *Energy Resources*.

5.3.3 WATER

Ongoing operation of Baylands development would also consume water and consumer products manufactured from nonrenewable materials and sources.[378] As discussed in Section 4.16, *Utilities, Service Systems, and Water Supply*, Baylands development would include construction and operation of a water recycling facility as part of Baylands development to minimize consumption of potable water supplies.

5.4 POTENTIAL IRREVERSIBLE ENVIRONMENTAL DAMAGE FROM ACCIDENTS

Baylands development has the potential to expose the public and the environment to hazards. As discussed in Section 4.13, *Hazards and Hazardous Materials*, the Baylands Specific Plan would result in land uses within the Baylands that typically involve the use, storage, disposal, and transportation of hazardous materials, such as fuels, lubricants, solvents, degreasers, and paints.

[378] As discussed in Section 4.3, *Land Use and Planning Policies*, and Section 4.11, *Energy Resources*, Baylands development would be all-electric and use 100 percent renewable energy, much of which would be generated onsite. Thus, Baylands development would not be a consumer of non-renewable energy supplies.

Hazardous materials in various forms can cause death, severe injury, long-lasting health effects, and damage to buildings and other property. Additionally, the transportation of hazardous materials and wastes may increase because of increased use of hazardous materials and wastes within the Baylands.

Compliance with numerous federal, state, and local regulations that are designed to reduce and/or eliminate exposure of hazardous materials to the public and the environment would be required of those transporting, using, or disposing of hazardous materials. Overall, compliance with permitting and associated regulations would protect future residents and others within the Baylands from exposure to hazardous materials.

5.5 IRREVERSIBLE ENVIRONMENTAL CHANGES

The irreversible commitment of land within the Baylands for development of additional housing and commercial space along with recreational facilities within the City of Brisbane would result in the following irreversible environmental changes:

- Changes to existing views and the visual character of the site, as discussed in Section 4.5, *Aesthetic and Visual Resources*, including a significant loss of scenic vistas that would be reduced to less than significant with mitigation incorporated.
- The increased resident and employee population that would result from Baylands development analyzed in Section 4.4, *Population and Housing*. The Specific Plan would permit development of 2,200 dwelling units and up to 6.5 million square feet of commercial space with an additional 500,000 square of hotel space, resulting in a resident population of 4,905 and an employee population of 19,480. These increases in resident and employee population are precursors to the increased air pollutant and greenhouse gas emissions documented in Section 4.9, *Air Quality*, and Section 4.10, *Greenhouse Gas Emissions*, respectively.
- Increased noise resulting from implementation of the Specific Plan as documented in Section 4.12, *Noise and Vibration*.
- Increased demands for:
    - Public utilities (e.g., water and sewer systems, as well as water supply) as discussed in Section 4.16, *Utilities, Service Systems, and Water Supply*.
    - Public services (e.g., police, fire, schools, libraries) as discussed in Section 4.16, *Public Services and Facilities*.
- These increased demands contribute to and are indistinguishable from the increased air pollutant and greenhouse gas emissions documented in Section 4.9, *Air Quality*, and Section 4.10, *Greenhouse Gas Emissions*, respectively.

While Baylands development would increase resource consumption during construction and operation, it would also result in some benefits related to long-term resource consumption in the region. As discussed in Section 4.3, *Land Use and Planning Policies*, the Baylands site is within a Priority Development Area identified in Plan Bay Area 2050, the Regional Transportation Plan/Sustainable Communities Strategy for the nine-county Bay Area region, and Baylands development would be consistent with that plan. The Baylands Specific Plan would provide the City of Brisbane with adequate sites for housing development to meet the City's share of regional housing needs, including housing very low and low-income households in proximity to transit and employment.

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CHAPTER 6 GROWTH-INDUCING EFFECTS

6.1 INTRODUCTION

This chapter analyzes the growth-inducing potential of the 2025 Specific Plan project and the associated secondary effects of growth that the Specific Plan might facilitate. As required by the California Environmental Quality Act (CEQA), an Environmental Impact Report (EIR) must discuss the growth-inducing impacts of the proposed project. (Public Resources Code Section 21100(b)(5)). Specifically, CEQA Guidelines Section 15126.2(e) states an EIR must:

> *Discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth (a major expansion of a recycled water plant might, for example, allow for more construction in service areas). Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also discuss the characteristic of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.*

Pursuant to CEQA Guidelines Section 15126.2(e), the analyses and conclusions set forth in this chapter do not address or imply whether any growth that may be induced by the Baylands Specific Plan would be planned or unplanned or would be beneficial or detrimental.

CEQA Guidelines Section 15126.2(e) requires an EIR to "discuss the ways" in which a project could foster growth, and to discuss project characteristics that may "encourage … activities that could significantly affect the environment," Given the large number of variables involved (e.g., income ranges of Baylands employment; types, cost, and location of available housing at the time on-site jobs are created; individual preferences of Baylands employees), determining where, when, or in what form induced growth might occur can be difficult to predict.

6.2 POTENTIAL FOR GROWTH INDUCEMENT

This analysis examines the potential for implementation of the 2025 Specific Plan project to:

- Directly generate substantial new population or employment growth as the result of permitting new housing and/or employment-generating uses.
- Stimulate economic activity within the area such that additional housing, businesses, or services would be needed to support the new economic activity;

- Remove a physical obstacle to additional growth and development beyond the Specific Plan area, such as by removing a constraint to or increasing the capacity of infrastructure or public services. For example, an increase in the capacity of a utility or roadway could allow either new or additional development in the surrounding area; or
- Remove a regulatory obstacle, such as by increasing allowable development intensity and thereby establishing a precedent for additional increases in allowable development intensity outside of the project site.

6.2.1 DIRECT GENERATION OF POPULATION AND EMPLOYMENT GROWTH

Direct growth inducement results when a project, for example, involves construction of new housing or employment-generating development, or other uses that would result in additional residents and jobs. Section 4.4, *Population and Housing*, presents a detailed analysis of the potential for the Baylands development to induce substantial increases in population not previously contemplated by regional growth projections. Association of Bay Area Governments (ABAG) growth forecasts for Brisbane, as well as growth forecasts for the San Francisco/San Mateo Bi-County and Bayview/Hunters Point/Candlestick Point Priority Development Areas (PDAs) provide the context for evaluating the projected population, housing, and employment impacts of Baylands development. As noted in Section 4.4, *Population and Housing*, the projections used in analyzing the extent to which Baylands development would induce population growth are based on growth forecasts prepared for the Bay Area Sustainable Communities Strategy, Plan Bay Area 2050. This same regional approach is used to assess the potential for Baylands development to induce substantial, unanticipated growth.

The Baylands Specific Plan would permit a substantial number of new housing units and jobs (through the provision of new employment-generating land uses), including 2,200 dwelling units, 6.5 million square feet of office and commercial development, and 500,000 square feet of hotel use, which is consistent with long-term socioeconomic projections. Thus, the Baylands Specific Plan would directly induce substantial household and employment growth.

6.2.2 STIMULATION OF ECONOMIC ACTIVITY THAT CREATES A NEED FOR ADDITIONAL HOUSING, BUSINESSES, OR SERVICES

Induced growth can occur outside of a project site as the result of direct and indirect investment and spending by residents, employees, and businesses. Such growth stems from the "induced" employment and retail demand generated by a project's economic activity. Indirect employment growth generated by a direct increase in economic activity can be due to the increases in spending that would occur on the part of the businesses, employees, and employee households. It could also be due to the additional spending that would occur on the part of suppliers of goods and services demanded by a project's direct economic activity (households, businesses, and employees).

The Baylands Specific Plan would encourage and facilitate economic growth. During construction, a number of temporary design and engineering jobs, as well as temporary employment for a wide variety of construction specialties, would be generated. These jobs would be available to varying degrees from the time site-specific engineering and architectural design begins through construction to buildout of the Specific Plan. This would be a direct but temporary growth-inducing effect of the Specific Plan. As discussed in Section 4.4, *Population and Housing*, due to the availability of construction workers and the phasing of Baylands development, it is unlikely that construction workers would relocate their households because of the construction job opportunities presented by Baylands development. Because of the large number of engineering and architectural design firms located within the nine-county San Francisco Bay Area and the ability of design firms to provide their services far from their physical locations, it is also unlikely that design professionals would relocate their households because of the job opportunities presented by Baylands development.

The estimated 19,480 jobs that would be created within the Baylands as the result of Specific Plan buildout would be associated with approximately 14,537 worker households, based on the projected average number of workers per household (1.34) for the nine-county San Francisco Bay Area in 2050 (MTC/ABAG 2021).

As indicated in the 2020 Census, 59.8 percent of Brisbane residents were employed within San Mateo County. Although the 2020 Census (U.S. Census 2021) does not report the number of Brisbane residents employed within Brisbane, past demographic reports indicate that about 15 percent of employed Brisbane residents held jobs in the City, while Brisbane residents working in the City held about 5 percent of the jobs in Brisbane and residents of other San Mateo County cities and San Francisco held most of Brisbane's jobs (ESA 2018). Thus, it is reasonable to project that the work force for increased Baylands employment would primarily be drawn from residents of San Francisco and San Mateo counties. In addition, it is reasonable to assume the work force would be primarily drawn from these counties given that the population and employment growth that would be generated by Baylands development would be consistent with Plan Bay Area 2050 (see **Table 4.3-1** and **Table 4.3-2**).

The degree to which Baylands housing would meet the needs of Baylands employees depends on a variety of factors including types of employment, price of housing, and where specifically new employees at Baylands would be drawn from, for which little information is available at this point in the planning process. However, as discussed in the analysis of Threshold POP-3, compliance with Brisbane inclusionary housing requirements provide an array of dwelling units in the Baylands that would be affordable to households of different income levels, thereby increasing the opportunity for on-site workers to also live on-site.

Specific Plan residential and office development would result in a demand for new retail and service commercial uses. According to the urban study prepared for the Baylands, the Baylands' residents and employees would generate retail sales capable of supporting 801,175 square feet

of retail floor space as indicated in **Table 6-1** (ALH Urban and Regional Economics 2023). Much of this demand would consist of community- and regional-oriented retail outlets.

Table 6-1: Baylands Specific Plan Supportable Retail Square Footage by Type

Retail Category	Baylands			
	Households	Employees	Hotel Guests	Total Demand
Home Furnishings and Appliance Stores	14,490			14,490
Building Materials and Garden Equipment	25,959			25,959
Food and Beverage Stores	34,085	56,291		90,354
Clothing and Accessories	18,078			18,078
General Merchandise	47,491			47,491
Food Services and Drinking Places	27,756	78,016	39,041	144,787
Other Retail	47,257	374,798		422,055
Services	37,962			37,962
TOTAL	**253,078**	**509,083**	**39,014**	**801,175**

SOURCE: ALH Urban and Regional Economics, *The Baylands Urban Decay Analysis*, July 2023.

As indicated in the Baylands Urban Decay Study, there are currently 22 development projects providing retail space under construction (147,050 s.f.), approved (793,000 s.f.), or undergoing review (3,700 s.f.) in the Baylands retail market area, which consists of the City of Brisbane, the southern portion of San Francisco near the Brisbane city limits, the eastern portion of Daly City, and the northern portion of South San Francisco. Thus, retail demand generated by Baylands development would be met by the large amount of commercial development that is under construction, approved, proposed, or planned within the Baylands retail market area in Brisbane, the southern portion of San Francisco, the eastern portion of Daly City, and the northern portion of South San Francisco. Thus, Baylands development would not induce retail growth beyond that already under construction, approved, proposed, or planned.

6.2.3 REMOVE PHYSICAL OBSTACLES TO GROWTH

The elimination of a physical obstacle to growth such as a lack of access, water supply, or public service infrastructure would be considered to be a growth-inducing impact.

a. Water Supply

The acquisition of a water supply from the California Water Service Company (Cal Water) by establishing Cal Water as the water service agency for the Baylands, Sierra Point, and Beatty subareas for the 2025 Specific Plan project would replace use of the City's water supply for these areas and become available for use elsewhere within Brisbane. **Table 6-2** identifies the water demands currently being met by City water supply within the proposed Cal Water service area expansion. Once Cal Water assumes service for these areas, the City of Brisbane

would no longer be responsible for meeting annual water demands of approximately 35.9 million gallons per year.

Table 6-2: Water Use Currently Supplied by the City of Brisbane to the Area Proposed to Be Served by Cal Water (million gallons per year)

Location	2019	2020	2021	2022	2023	Average
Baylands	0.58	0.54	0.59	0.49	0.50	0.54
Sierra Point	32.85	37.04	33.31	34.51	40.20	35.58
TOTAL WATER DEMAND	**33.43**	**37.58**	**33.90**	**35.00**	**40.70**	**36.12**

SOURCE: Brisbane Public Works, 2025

Table 6-3, **Table 6-4**, and **Table 6-5** identify how the proposed expansion of Cal Water's service area would affect the City's ability to provide water to its customers in normal dry and multiple dry years, respectively.

Table 6-3: Projected Normal Year Water Supply and Demand with and without the Proposed Cal Water Service Area Expansion (million gallons per year)

City of Brisbane Projected Water Supply and Demand							
Year	City of Brisbane Water Supply[a]	Without Proposed Cal Water Service Area Expansion (Existing City Service Area)		With Proposed Cal Water Service Area Expansion (see Figure 3-45)			
		Demand with Future Proposed Projects[b]	Supply Shortfall with Future Proposed Projects	City Water Demand to Be Assumed by California Water Company		Net City Water Demand and Shortfall	
				Existing Water Demand[c]	Future Proposed Projects Water Demand[d]	Water Demand[e]	Supply Shortfall
2025	358	293	None	36	—	—	None
2030	358	408	50	36	100	272	None
2035	358	564	206	36	250	278	None
2040	358	819	461	36	500	283	None
2045	358	850	492	36	525	289	None

SOURCE: Water Supply Assessment for the Guadalupe Quarry Redevelopment Project, 2024; Water Supply Assessment for the Baylands Specific Plan, 2025; Desert Shores Consulting.

NOTES:

a. City water supply taken from Water Supply Assessment for the Guadalupe Quarry Redevelopment Project (Guadalupe Quarry WSA).
b. Project water demand based on Guadalupe Quarry Redevelopment WSA projections of water demand for the Quarry Project. Projections for Sierra Point Towers, Sierra Point Hotel and Life Sciences, and High-Speed Rail Light Maintenance Facility based on Guadalupe Quarry Water Supply Assessment estimate of total water demand and projected buildout of these projects. Baylands buildout based on Baylands Water Supply Assessment.
c. Based on Table 6-2.
d. Projections for Sierra Point Towers, Sierra Point Hotel and Life Sciences, and High-Speed Rail Light Maintenance Facility based on Guadalupe Quarry Water Supply Assessment estimate of total water demand and projected buildout of these projects. Baylands water demand based on Baylands Water Supply Assessment.
e. Water demand for City water service area after Cal Water assumes responsibility for providing water to the Baylands and Sierra Point areas was determined based on the following formula: City of Brisbane Water Supply – (Existing + Future Projects Water Demand).

As indicated in **Table 6-3**, the proposed Cal Water service area expansion would eliminate projected water supply shortfalls for the City of Brisbane. In a single dry year, **Table 6-4** indicates that the proposed service area expansion would eliminate a supply shortfall in 2025, and the City would experience water supply shortfalls starting in 2030 that would be far less severe than without the expansion. As shown in **Table 6-5**, the proposed Cal Water service area expansion would substantially reduce but not eliminate projected water supply shortfalls for the City of Brisbane in multiple dry years. Because the proposed Cal Water service area expansion would provide adequate water supply for the Baylands Specific Plan and future development projects within the Baylands and Sierra Point areas, the 2025 Specific Plan project would remove a critical obstacle to Specific Plan development and development of future projects within the Baylands and Sierra Point areas and would thus be considered to be growth inducing.

Table 6-4: Projected Single Dry Year Water Supply and Demand with and without the Proposed Cal Water Service Area Expansion

City of Brisbane Projected Water Supply and Demand							
Year	City of Brisbane Water Supply[a]	Without Proposed Cal Water Service Area Expansion (Existing City Service Area)		With Proposed Cal Water Service Area Expansion (see Figure 3-45)			
		Demand with Future Proposed Projects[b]	Supply Shortfall with Future Proposed Projects	City Water Demand to Be Assumed by California Water Company		Net City Water Demand and Shortfall	
				Existing Water Demand[c]	Future Proposed Projects Water Demand[d]	Water Demand[e]	Supply Shortfall
2025	187	293	106	36	—	—	None
2030	192	408	216	36	100	272	80
2035	196	564	368	36	250	278	82
2040	199	819	620	36	500	283	84
2045	174	850	676	36	525	289	115

SOURCE: Water Supply Assessment for the Guadalupe Quarry Redevelopment Project, 2024; Water Supply Assessment for the Baylands Specific Plan, 2025; Desert Shores Consulting.

NOTES:

a. City water supply taken from Water Supply Assessment for the Guadalupe Quarry Redevelopment Project (Guadalupe Quarry WSA).
b. Project water demand based on Guadalupe Quarry Redevelopment Water Supply Assessment projections of water demand for the Quarry Project. Projections for Sierra Point Towers, Sierra Point Hotel and Life Sciences, and High-Speed Rail Light Maintenance Facility based on Guadalupe Quarry Water Supply Assessment estimate of total water demand and projected buildout of these projects based on Baylands Water Supply Assessment.
c. Based on Table 6-2.
d. Projections for Sierra Point Towers, Sierra Point Hotel and Life Sciences, and High-Speed Rail Light Maintenance Facility based on Guadalupe Quarry Water Supply Assessment estimate of total water demand and projected buildout of these projects. Baylands water demand based on Baylands Water Supply Assessment.
e. Water demand for City water service area after Cal Water assumes responsibility for providing water to the Baylands and Sierra Point areas based on the following formula: City of Brisbane Water Supply – (Existing + Future Projects Water Demand).

Table 6-5: Projected Multiple Dry Year Water Supply and Demand with and without the Proposed Cal Water Service Area Expansion

City of Brisbane Projected Water Supply and Demand							
Year – Multiple Dry Year	City of Brisbane Water Supply[a]	With Proposed Cal Water Service Area Expansion (Existing City Service Area)		With Proposed Cal Water Service Area Expansion (see Figure 3-45)			
		Demand with Future Proposed Projects[b]	Supply Shortfall with Future Proposed Projects	City Water Demand to Be Assumed by California Water Company		Net City Water Demand and Shortfall	
				Existing Water Demand[c]	Future Proposed Projects Water Demand[d]	Water Demand[e]	Supply Shortfall
2025 - 1	187	293	106	36	—	257	70
2025 - 2	161	293	132	36	—	257	96
2025 - 3	161	293	132	36	—	257	96
2025 - 4	161	293	132	36	—	257	96
2025 - 5	161	293	132	36	—	257	96
2030 - 1	192	408	216	36	100	272	136
2030 - 2	165	408	243	36	100	272	136
2030 - 3	165	408	243	36	100	272	136
2030 - 4	165	408	243	36	100	272	136
2030 - 5	165	408	243	36	100	272	136
2035 - 1	196	564	368	36	250	278	82
2035 - 2	168	564	396	36	250	278	82
2035 - 3	168	564	396	36	250	278	82
2035 - 4	168	564	396	36	250	278	82
2035 - 5	154	564	410	36	250	278	124
2040 - 1	199	819	620	36	500	283	34
2040 - 2	170	819	649	36	500	283	63
2040 - 3	170	819	649	36	500	283	63
2040 - 4	150	819	669	36	500	283	83
2040 - 5	150	819	669	36	500	283	83
2045 - 1	174	850	676	36	525	289	115
2045 - 2	174	850	676	36	525	289	115
2045 - 3	174	850	676	36	525	289	115
2045 - 4	148	850	702	36	525	289	141
2045 - 5	148	850	702	36	525	289	141

SOURCE: Water Supply Assessment for the Guadalupe Quarry Redevelopment Project, 2024; Water Supply Assessment for the Baylands Specific Plan, 2025; Desert Shores Consulting.

NOTES:

a. City water supply taken from Water Supply Assessment for the Guadalupe Quarry Redevelopment Project (Guadalupe Quarry WSA).
b. Project water demand based on Guadalupe Quarry Redevelopment Water Supply Assessment projections of water demand with the Quarry Project. Projections for Sierra Point Towers, Sierra Point Hotel and Life Sciences, and High-Speed Rail Light Maintenance Facility

City of Brisbane Projected Water Supply and Demand							
Year – Multiple Dry Year	City of Brisbane Water Supply[a]	With Proposed Cal Water Service Area Expansion (Existing City Service Area)		With Proposed Cal Water Service Area Expansion (see Figure 3-45)			
		Demand with Future Proposed Projects[b]	Supply Shortfall with Future Proposed Projects	City Water Demand to Be Assumed by California Water Company		Net City Water Demand and Shortfall	
				Existing Water Demand[c]	Future Proposed Projects Water Demand[d]	Water Demand[e]	Supply Shortfall

are based on the Guadalupe Quarry Redevelopment Water Supply Assessment estimate of total water demand. The projected buildout of these projects are based on projected Baylands Water Supply Assessment.

c. Based on Table 6-2.

d. Projections for Sierra Point Towers, Sierra Point Hotel and Life Sciences, and High-Speed Rail Light Maintenance Facility based on Guadalupe Quarry Redevelopment Water Supply Assessment estimate of total water demand and projected buildout of these projects. Baylands water demand based on Baylands Water Supply Assessment.

e. Water demand for City water service area after Cal Water assumes responsibility for providing water to the Baylands and Sierra Point areas based on the following formula: City of Brisbane Water Supply – (Existing + Future Projects Water Demand).

b. Provision of Infrastructure

Nearly all water, wastewater, water recycling, storm drain, energy facilities, communications, and other utilities improvements that would be constructed to support Baylands development would be designed and sized for use solely by Baylands development. While the need for additional water storage has been generated by the Specific Plan, the proposed water storage tank would be designed and operated as part of California Water Company's water system and would store water for the South San Francisco District rather than Baylands-only use.

However, because the additional water storage capacity to be provided within the Baylands would not increase water supply for future development, the on-site water storage tank would not be growth inducing. The 250 MW utility-scale battery storage facility proposed for the Baylands would operate as a regional PG&E facility while also functioning to balance Baylands renewable energy generation and its energy consumption. Because availability of energy supplies is not a constraining factor in local or regional population or employment growth[379], development of the utility-scale battery storage facility would not remove a constraint to development and would therefore not be growth inducing.

In addition, while the parks, trails, and habitat enhancements included as part of Baylands development would be available to the general public, these improvements would not remove constraints to development of any property other than the Baylands itself.

Except for major roadway improvements designed to serve regional development in the Bi-County San Francisco/Daly City/Brisbane area (Geneva Avenue extension and access

[379] PG&E, *2018 Integrated Resource Plan*. August 1, 2018. https://www.pge.com/assets/pge/docs/about/doing-business-with-pge/2018-PGE-Integrated-Resource-Plan.pdf.

improvements for the Candlestick Point interchange), infrastructure improvements associated with Baylands development are designed to only serve Baylands development and would not result in a growth-inducing impact. However, by improving access to US Highway 101, the major roadway improvements designed to serve regional development in the Bi-County San Francisco/Daly City/Brisbane area would remove a major obstacle to development and would facilitate growth in Daly City, as well as development of the San Francisco/San Mateo Bi-County and Bayview/Hunters Point/Candlestick Point PDAs described in Plan Bay Area 2050, including cumulative projects addressed in Chapter 7, *Cumulative Environmental Effects*. While these major roadway improvements are not part of the Baylands Specific Plan components described in EIR Chapter 3, *Project Description*, they are nonetheless required to support Baylands development. Because major roadway improvements would remove obstacles to development of the Specific Plan area and surrounding lands, they would result in a growth-inducing impact.

6.2.4 REMOVE A REGULATORY OBSTACLE TO GROWTH

The Baylands Specific Plan and associated actions described in Draft EIR Chapter 3 do not remove any regulatory obstacles for development outside of the Specific Plan area.

6.3 ENVIRONMENTAL IMPACTS OF INDUCED GROWTH

The Baylands Specific Plan would directly foster population and employment growth within the Baylands as the result of constructing 2,200 dwelling units, 6.5 million square feet of commercial and office development, and an additional 500,000 square feet of hotel use. The direct and indirect physical environmental effects that would result from this development are analyzed throughout Chapter 4, *Environmental Setting, Impacts, and Mitigation Measures*.

In addition to development within the Baylands, the Specific Plan will generate the potential for inducing growth outside of the Baylands as the result of:

- Providing an adequate water supply for Baylands development as well as future development project within the Baylands and Sierra Point areas.
- Fostering population growth and construction of housing;
- Eliminating obstacles to population growth;
- Fostering economic growth; and
- Affecting service levels, facility capacity, or infrastructure demand leading to construction of new and expanded facilities.

The physical environmental effects of Baylands-induced growth are addressed in Draft EIR Chapter 7, *Cumulative Environmental Effects*.

6.3.1 REFERENCES – GROWTH-INDUCING EFFECTS

ALH Urban and Regional Economics. 2023. *The Baylands Urban Decay Analysis*. August 2023.

EKI Environment & Water. 2024. *Water Supply Assessment for the Guadalupe Quarry Redevelopment Project, City of Brisbane*. September 2024.

EKI Environment & Water. 2024. *Water Supply Assessment for the Baylands Specific Plan, City of Brisbane*. January 2025.

ESA (Environmental Science Associates). 2018. *Brisbane Baylands Final Program Environmental Impact Report*. August 2018.

PG&E (Pacific Gas & Electric). 2018. *2018 Integrated Resource Plan*. August 1, 2018. https://www.pge.com/assets/pge/docs/about/doing-business-with-pge/2018-PGE-Integrated-Resource-Plan.pdf.

United States Census Bureau. 2021. American Community Survey. Table S0801, Commuting Characteristics by Sex. Accessed July 31, 2023. https://data.census.gov/table?q=Brisbane,+CA&tid=ACSST5Y2021.S0801.

CHAPTER 7 CUMULATIVE ENVIRONMENTAL EFFECTS

As required by California Environmental Quality Act (CEQA) Guidelines Section 15130, this chapter analyzes the ways in which impacts of the 2025 Specific Plan project would combine with the impacts of other past, present, and reasonably foreseeable probable future projects to create "cumulatively significant" effects (i.e., result in significant cumulative impacts). For each identified significant cumulative impact, this chapter also determines whether the Specific Plan's incremental contribution to the significant cumulative impact is "cumulatively considerable."

Understanding the nature and extent of cumulative impacts and the Specific Plan's contribution to them is critical to understanding the full extent of the Specific Plan's environmental effects. Even in cases where the individual impacts of Baylands development are less than significant, environmental impacts can occur incrementally from a variety of small sources, including the Baylands. These sources may individually appear insignificant but assume "threatening dimensions only when considered in light of the other sources with which they interact."[380] As such, cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time (CEQA Guidelines Section 15355).[381]

CEQA Guidelines Section 15130 Discussion of Cumulative Impacts

CEQA Guidelines Section 15355 defines a cumulative impact as an impact that is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts within a given geographic area.

CEQA Guidelines Section 15130 requires an EIR to discuss cumulative impacts of a project when the project contributes to some degree to an impact that, when viewed in combination with the effects of past, present, and reasonably foreseeable probable future projects would be "cumulatively significant," regardless of whether the project itself was determined to have a significant or less than significant impact.

Because cumulative impact analysis addresses the ways in which impacts of individual impacts combine, a series of less than significant project impacts can combine to generate a significant cumulative impact. In addition, a project's contribution to a significant cumulative impact may be cumulatively considerable, even if the project's individual impact was determined to be less than significant.

Only those cumulative impacts to which the project contributes are addressed in an environmental impact report.

7.1 DEFINITIONS

Cumulative Impact: A cumulative impact is the change in the physical environment that results from the incremental effects of a project when evaluated together with the impacts of other past,

[380] *Los Angeles Unified School Dist. v. City of Los Angeles* (1997) 58 Cal. App. 4th 1019, 1025; *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal. App. 3d 693, 720; Selmi, *Judicial Development of CEQA* (1984) 18 U.C. Davis L. Rev. 197, 244.

[381] *Los Angeles* Unified *School Dist.* v. *City of Los Angeles* (1997) 58 Cal. App. 4th 1019, 1025; *Kings County Farm Bureau* v. *City of Hanford* (1990) 221 Cal. App. 3d 693, 720; Selmi, *Judicial Development of CEQA* (1984) 18 U.C. Davis L. Rev. 197, 244.

present, and reasonably foreseeable probable future projects causing related impacts. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time. CEQA Guidelines state that if a project does not make some contribution to a cumulative environmental effect, the cumulative effect cannot be characterized as a cumulative impact of that project (CEQA Guidelines Section 15130; see *Sierra Club v. West Side Irrig. Dist.* [2005] 128 Cal.App.4th 690, 700).

Cumulatively Considerable Contribution: The incremental effects of an individual project would be cumulatively considerable if they would contribute substantially to an identified significant cumulative impact. However, the "mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed project's incremental effects are cumulatively considerable" (CEQA Guidelines Section 15064(h)(4)).

Less than Cumulatively Considerable Contribution: The project's incremental contribution to a significant cumulative impact would not contribute substantially to an identified significant cumulative impact and thus is not significant. The project's contribution to a significant cumulative impact could also be rendered less than cumulatively considerable if the project would implement or fund its fair share of a mitigation measure or measures that would alleviate a significant cumulative impact.

7.2 APPROACH TO CUMULATIVE IMPACT ANALYSIS

In accordance with CEQA Guidelines Section 15130(b), the discussion of cumulative impacts provided in this chapter is intended to "reflect the severity of the impacts and their likelihood of occurrence." CEQA Guidelines Section 15130(b) states that the discussion of cumulative impacts "need not provide as great [of a level of] detail as is provided for the effects attributable to the project alone." CEQA Guidelines state that the cumulative impact discussion should be guided by practicality and reasonableness and focus on the cumulative impacts that would result from the combination of the proposed project and other projects, rather than the attributes of the project or other projects that do not contribute to cumulative impacts.

Pursuant to CEQA Guidelines Section 15130(a)(1), this EIR discusses only those cumulative impacts to which the 2025 Specific Plan project would contribute. Thus, cumulative impact analysis is not provided for any environmental resource area for which the Baylands Specific Plan would have no environmental impact. Analysis of cumulative impacts is, however, provided for all Baylands impacts determined to be less than significant, less than significant with mitigation incorporated, and significant and unavoidable.

The developed portions of ongoing phased projects as they existed in the Spring 2023 baseline are addressed as part of the environmental setting/baseline for cumulative effects. The portions of ongoing, phased development projects that were yet to be built as of the Spring 2023 baseline

are considered in relation to existing and reasonably foreseeable probable future projects and are included as part of the analysis of cumulative impacts.

When the combined cumulative impact associated with the Specific Plan's incremental effect and the effects of other projects is not significant, the EIR indicates why the cumulative impact is not significant, consistent with CEQA Guidelines Section 15130(a). If the combined effects of the 2025 Specific Plan project and those of other past, present, and reasonably foreseeable probable future projects would be significant, the Specific Plan's contribution to the significant cumulative impact is analyzed as required by CEQA to determine whether the Baylands *contribution* to the significant cumulative impact would be "cumulatively considerable."

Because the Baylands Specific Plan would not contribute to cumulative impacts related to certain issues,[382] cumulative impacts associated with those issues are not addressed per the requirements of CEQA Guidelines Section 15130(a)(1). The following cumulative impacts are therefore addressed in this chapter:

- Land Use and Planning Policy
- Population and Housing
- Aesthetic and Visual Resources
- Biological Resources
- Cultural and Tribal Cultural Resources
- Transportation
- Air Quality
- Greenhouse Gas Emissions
- Energy Resources
- Noise and Vibration
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Geology, Soils, and Seismicity
- Utilities, Service Systems, and Water Supply
- Public Services and Facilities
- Recreational Resources
- Wildland Fire

7.2.1 GEOGRAPHIC SCOPE OF CUMULATIVE IMPACT ANALYSES

Section 7.3, below, examines the cumulative environmental effects of Baylands development as described in EIR Chapter 3, *Project Description*, in combination with past, present, and reasonably foreseeable probable future projects that could combine with the Specific Plan's impacts to generate cumulative impacts.

CEQA requires an EIR to "define the geographic scope of the area affected by the cumulative effect and provide a reasonable explanation for the geographic area" (CEQA Guidelines

[382] Cumulative environmental effects to which the Baylands Specific Plan would not contribute include Agricultural and Forestry Resources; Mineral Resources; and Geology, Soils, and Seismicity: Use of Septic Tanks or other Alternative Waste Disposal Systems.

Section 15130(b)(3)). The geographic scope is determined based on the resource under review such that analysis of each cumulative impact is undertaken within a specific geographic area within which the impacts of individual projects, taken together, could generate a cumulative impact. For example, because most air quality impacts of individual projects combine to create impacts within a specific air basin, cumulative air quality impacts are analyzed regionally for the Bay Area Air Basin. In contrast, most Baylands Specific Plan aesthetic resource impacts would combine with those of other closely related projects to create cumulative impacts only within the specific viewshed of the Specific Plan area. Such impacts are, therefore, analyzed within a specific viewshed area.

Because the manner in which impacts of Baylands development would combine with the impacts of past, present, and reasonably foreseeable probable future projects differs for each impact being analyzed, the geographic scope of individual cumulative impact analyses varies based on the impact analyzed and the area over which Baylands impacts might combine with those of other past, present, and reasonably foreseeable probable future projects. Section 7.3 identifies the geographic scope used for each cumulative impact analysis to address the cumulative impacts of Baylands development in combination with buildout of the Brisbane General Plan and other past, present, and reasonably foreseeable probable future projects.

7.2.2 PROJECTIONS- AND LIST-BASED APPROACHES TO CUMULATIVE IMPACT ANALYSIS

CEQA Guidelines Section 15130(b)(1) describes two approaches to analyzing the cumulative impacts of a project, either or both of which may be used in an EIR:

- The first approach relies upon a summary of projections contained in an adopted local, regional, or state-wide plan, or related planning or environmental documents that describes or evaluates conditions contributing to the cumulative effect. In some cases, such as transportation analysis, models generated by agencies during preparation of adopted plans are used in the EIR's cumulative impact analysis.
- The second is a "list approach," which requires a listing of past, present, and reasonably foreseeable probable future projects producing related or cumulative impacts, including, if necessary, projects outside the control of the lead agency.

The cumulative impact analyses in this EIR use both projections- and list-based approaches, as well as a combination of these two approaches, depending upon the resource area analyzed. Where projections are available from an adopted local, regional, or state-wide plan, the projections approach is typically used. Where such projections are not available or the geographic analysis area does not lend itself to a projections approach, a list-based approach is typically used.

For each cumulative impact evaluated in this chapter, the specific geographic area of analysis and the method of analysis, whether projections-based, list-based, or a combination of the two, are described in the relevant resource sections below.

a. Use of the Nine-County San Francisco Bay Area Region for Projections-Based Cumulative Impact Analysis

The nine-county San Francisco Bay Area region is an appropriate geographic area for analysis of many different cumulative impacts because the entire Bay Area falls within the jurisdiction of a single Metropolitan Planning Organization (the Metropolitan Transportation Commission [MTC] and a single Council of Governments (Association of Bay Area Governments [ABAG]), which together are responsible for regional land use and transportation planning. The nine-county Bay Area region is also the geographic boundary for *Plan Bay Area 2050*, which serves as the sustainable communities strategy and basis for transportation planning for the nine-county Bay Area region. In addition, the nine-county Bay Area region is close in size and shape to the San Francisco Bay Area Air Basin and the watershed that drains into San Francisco Bay. While the Bay Area is not a fully self-contained community, more than 95 percent of Bay Area employees who commute to work do so from within one of the nine Bay Area counties (MTC 2024).

b. Regional and Citywide Growth Projections

Projections-based analyses rely on projections and impact analyses contained in adopted local, regional, or state-wide plans, or related planning documents, including:

- The regional growth forecast approved by the Metropolitan Transportation Commission (MTC) and the Association of Bay Area Governments (ABAG) in September 2021;
- *Plan Bay Area 2050*, which serves as the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) for the nine-county San Francisco Bay Area region, including the Plan Bay Area 2050 EIR;
- *Spare the Air · Cool the Climate*, which is the San Francisco Air Basin's Clean Air Plan, prepared and adopted by the Bay Area Air Quality Management District;
- Socioeconomic projections prepared by the City/County Association of Governments of San Mateo County (C/CAG);
- The projected buildout of the Brisbane, San Francisco, Daly City, and South San Francisco General Plans;
- The San Francisco Urban Water Management Plan; and
- The South San Francisco District Urban Water Management Plan (California Water Company).

Projections used for projections-based cumulative analyses are identified in **Table 7-1**.

Table 7-1: Household and Employment Projections used in Cumulative Impact Analyses

	Households			Employment		
	2015	2050	Change: 2015–2050	2015	2050	Change: 2015–2050
Brisbane [a]	1,910	2,713	803	10,465	14,865	+4,400
San Mateo County	265,000	394,000	+129,000	393,000	507,000	+114,000
Bay Area Region	2,667,000	4,043,000	+1,367,000	4,005,000	5,408,000	+1,403,000

SOURCE: City of Brisbane, 2022; Metropolitan Transportation Commission/Association of Bay Area Governments, 2021.

NOTE:

a. Does not include development of the Baylands or other cumulative projects within Brisbane (**Table 7-2** Cumulative Projects 2–4: Sierra Point Towers, Guadalupe Quarry Project, Sierra Point Hotel and Life Sciences Project).

In cases where one or more of the cumulative projects identified below in **Table 7-2**, *Cumulative Projects List*, are not included in the projections identified in **Table 7-1**, they are added to such projections when analyzing cumulative impacts.

c. Cumulative Projects List

In this Draft EIR, list-based cumulative impact analyses rely on a list of past, present, and reasonably foreseeable probable future projects provided by the cities of San Francisco, Daly City, and South San Francisco in addition to projects within Brisbane. Large-scale regional projects, such as the Caltrain Modernization Program, High-Speed Rail Program San Jose to San Francisco Segment, improvement programs at San Francisco International Airport, and habitat restoration projects along the San Francisco Bay shoreline, are included in the cumulative projects list.

A total of 73 projects (16 infrastructure projects, 2 planning projects, and 55 development projects) were identified whose physical environmental effects might combine with those of the Baylands Specific Plan to create one or more cumulative impacts. These cumulative projects are identified in **Table 7-2** with locations illustrated in **Figure 7-1**. Specific Plan development represents 10.7 percent of the 20,629 cumulative units and 22.6 percent of the cumulative 28,722,643 square feet (s.f.) of commercial/office space.

Figure 7-1: Cumulative Projects Locations

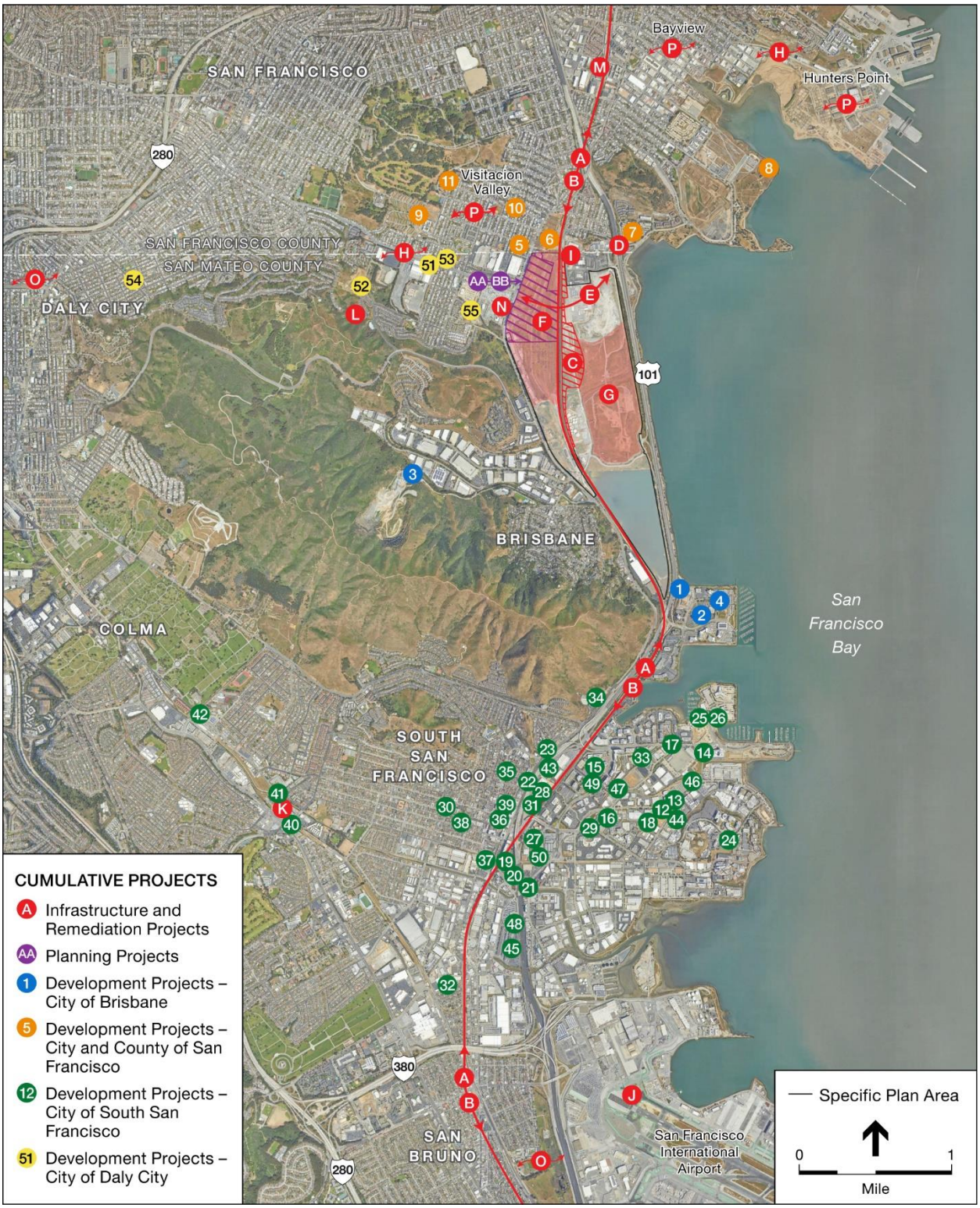


Table 7-2: Cumulative Projects List

No.	Project Name	Jurisdiction	Location in Relation to Baylands	Residential Units	Commercial/ Office Square Footage	Other	Description
Infrastructure, Remediation, and Water Supply Projects							
A	Caltrain Modernization Program	Peninsula Joint Powers Authority	Caltrain rail corridor from San Francisco through the Baylands to San Jose	NA	NA	NA	Electrification of the existing Caltrain corridor between San Francisco and San Jose; installation of a Communications Based Overlay Signal System Positive Train Control, which is an advanced signal system that includes federally mandated safety improvements; and the replacement of Caltrain's diesel trains with high-performance electric trains called Electric Multiple Units.
B	California High Speed Rail, San Francisco to San Jose Segment	California High Speed Rail Authority	Caltrain rail corridor from San Francisco through the Baylands to San Jose	NA	NA	NA	Planned 50-mile segment from San Francisco to San Jose passing through the Baylands would require four tracks in the Caltrain corridor and provide track improvements and grade separations that would allow for 22 trains to operate daily at speeds up to 110 mph. High speed rail stops, including station improvements are proposed in San Francisco, Millbrae, and San Jose. The existing Caltrain Bayshore Station will not be a stop for high-speed rail service along the corridor.
C	California High Speed Rail Brisbane Light Maintenance Facility	California High Speed Rail Authority	Area east of the Caltrain line within Baylands	NA	NA	NA	Approximately 45 acres of the Baylands east of the Caltrain right-of-way would be developed by the High-Speed Rail Authority as a light maintenance and storage facility.

No.	Project Name	Jurisdiction	Location in Relation to Baylands	Residential Units	Commercial/ Office Square Footage	Other	Description
D	US 101/Candlestick Interchange Reconstruction	Caltrans, San Francisco Transportation Agency, San Mateo Transportation Agency, City and County of San Francisco, City of Brisbane	Immediately northeast of the Specific Plan area	NA	NA	NA	Reconstruction of the US 101/Candlestick Interchange to a full all-directional interchange with a single-point cross-street connection, join an improved Harney Way to the east, and join the Geneva Avenue Extension to the west. The project includes two general purpose lanes and one transit-only lane in each direction between the Geneva Avenue Extension and Alana Way, and three general purpose travel lanes in each direction between Alana Way and Harney Way. Alana Way would become transit-only between Harney and Geneva.
E	Geneva Avenue Extension	San Francisco Transportation Agency, San Mateo Transportation Agency, City and County of San Francisco, City of Brisbane	Project is within the Baylands	NA	NA	NA	Extension of the existing Geneva Avenue east from its current terminus at Bayshore Boulevard, including a bridge over the Caltrain rail right-of-way. Geneva Avenue is planned as a 6-lane facility with two lanes for vehicles and one lane for bus rapid transit in each direction, sidewalks, and Class II bicycle facilities.
F	Site Remediation for Baylands Operable Units OU-SM, OU-2	California DTSC, San Francisco Bay RWQCB	Projects are within the Baylands	NA	NA	NA	Remediation of existing soil and groundwater contamination within the former Southern Pacific Railyard in the western portion of the Baylands.
G	Title 27 Landfill Closure	San Francisco Bay RWQCB, San Mateo County Environmental Health	Project is within the Baylands				Final landfill closure pursuant to the requirements of Title 27 within the former Brisbane Landfill in the eastern portion of the Baylands.
H	Geneva-Harney Bus Rapid Transit	San Francisco, Brisbane	Would traverse Geneva Avenue through the Baylands	NA	NA	NA	Provision of exclusive bus lanes, transit signal priority, and stations along Geneva Avenue (from Santos Street to Executive Park Boulevard), Harney Way, and Crisp Avenue, and terminating at the Hunters Point Shipyard Center.

No.	Project Name	Jurisdiction	Location in Relation to Baylands	Residential Units	Commercial/ Office Square Footage	Other	Description
I	Recology 501 Tunnel Avenue Facility Modernization Project	San Francisco, Brisbane	Immediately adjacent to the northern boundary of the Specific Plan area	NA	NA	NA	Physical and operational modifications to Recology's 501 facility to consolidate operations, increase efficiency, and support the San Francisco's Zero Waste program. The project would demolish or repurpose some existing structures, construct new buildings and parking areas, and reconfigure the campus layout. Recology's regional office, fleet maintenance, and fleet storage operations, currently at 250 Executive Park Boulevard and 900 7th Street, would be relocated to the 501 Tunnel site, which is within both San Francisco and Brisbane.
J	SFO Tomorrow Airport Development Plan	Unincorporated San Mateo County	5.5 miles to the south	NA	NA	NA	Taxiway and runway improvements; expansion and renovation of Terminal 3; internal improvements to other terminals; upgraded baggage handling system; roadway and parking improvements; new rental car center; air train expansion; and infrastructure improvements including new fuel tanks, substation improvements, and sea level rise protection.
K	Community Civic Campus	South San Francisco	3.1 miles to the southwest	NA	NA	NA	Design and construction of a new police station, a new fire station, and a shared library and parks and recreation facility.
L	San Bruno Mountain State and County Park Fuel Reduction Project	San Mateo County	2.0 miles to the west	NA	NA	NA	Ongoing fuel reduction/habitat improvement.

No.	Project Name	Jurisdiction	Location in Relation to Baylands	Residential Units	Commercial/ Office Square Footage	Other	Description
M	Egbert Switching Station (Martin Substation Extension)	San Francisco, Daly City, Brisbane	1.4 miles to the north (Egbert Switching Station) 0.3 miles to the west (Martin Substation	NA	NA	NA	Construction of a new 230 kV switching station (Egbert Switching Station). The project would reroute two existing underground 230 kV transmission lines currently connected to the existing Martin Substation and connect them to the proposed Egbert Switching Station. The existing Martin-Embarcadero line would be looped into the proposed Egbert Switching Station, creating a Martin-Egbert line and an Egbert-Embarcadero line, and the existing Jefferson-Martin line would be rerouted and extended to the proposed Egbert Switching Station, creating a Jefferson-Egbert line.
N	San Francisco Public Utilities Commission (SFPUC)–Pacific Gas and Electric Company (PG&E) Acquisition Project	Regional	NA	NA	NA	NA	Acquisition by SFPUC of a portion of the PG&E transmission system within the San Francisco city limits, including substations, interconnections, transformers, transmission and distribution lines, supporting equipment, operational facilities, relevant records, and other facilities (e.g., streetlights). The project would include physical separation of some assets from the remainder of PG&E's electricity grid, modification of existing infrastructure, and construction of new infrastructure. The portion of the project requiring new construction or modifications to existing facilities would primarily be in the southern portion of San Francisco and along the county border in the northern portions of Brisbane and Daly City. New equipment would be installed within the Martin, Potrero, Randolph, and Plymouth substations. Additional work would be performed in small, discontinuous areas generally located near the county border.

No.	Project Name	Jurisdiction	Location in Relation to Baylands	Residential Units	Commercial/ Office Square Footage	Other	Description
O	SFPUC Local Alternative Water Supply Projects	SFPUC	NA	NA	NA	NA	Planning program to increase long-term supply or reduce demand beyond existing infrastructure and surface water supplies of SFPUC's Regional Water System and local groundwater sources. The program is studying new and diverse or "alternative" water supply options such as groundwater banking, surface water storage expansion with a potential for diverse water supply sources, water transfers, purified water (potable reuse), desalination as well as technological innovations.
P	Southeast Muni Expansion	San Francisco Municipal. Railway	NA	NA	NA	NA	New Muni bus routes, bus route extensions and reroutes, and more frequent service on existing Muni bus routes in San Francisco's southeastern neighborhoods (Bayview, Hunters Point, and Visitacion Valley). Includes new service along Harney Way through to the existing Bayshore Caltrain station. Implementation of the initial bus service options is anticipated to begin along with the next major phases of the development projects, primarily at Candlestick Point-Hunters Point Shipyard.

No.	Project Name	Jurisdiction	Location in Relation to Baylands	Residential Units	Commercial/ Office Square Footage	Other	Description
Planning Projects							
AA	2023–2031 Housing Element	Brisbane	NA	NA	NA	NA	General Plan Housing Element to provide opportunities for the development of housing for all economic segments of the community between 2023 and 2031. The Housing Element identifies the following housing objectives based on the Regional Housing Needs Allocation prepared by ABAG: Very Low Income: 317 Low Income: 183 Moderate Income: 303 Above Moderate Income: 785 TOTAL: 1,588
BB	General Plan Buildout	Brisbane	NA	803 households	4,400 employees	NA	Buildout of the Brisbane General Plan other than Cumulative Development Projects – City of Brisbane numbers 2–4.
Development Projects – City of Brisbane							
1	Genesis Marina (3000–3500 Marina Blvd)	Brisbane	1.9 miles to the southeast	NA	422,000 s.f.	NA	Biotechnology campus of three buildings with office space above a two-level podium parking garage. 652 off-street parking spaces in parking podiums, 129 spaces in a surface parking lot, and 8 spaces for Bay Trail access.
2	Sierra Point Towers	Brisbane	1.9 miles to the southeast	NA	853,220 s.f. 40,000 s.f. amenity building	NA	Demolition of an existing parking structure and surface parking lot to construct two new life sciences office towers, an amenity building, and an 11-story parking structure with 3,771 parking spaces (87 additional surface parking spaces). New open space, a transit hub, and pedestrian and vehicular circulation would be provided.

No.	Project Name	Jurisdiction	Location in Relation to Baylands	Residential Units	Commercial/ Office Square Footage	Other	Description
3	Guadalupe Quarry Redevelopment Project	Brisbane	1.6 miles to the southwest	NA	NA	1,322,000 s.f. warehouse	General Plan Amendment, pre-zoning, and design permit for development of a warehouse on approximately 56 acres on the approximately 145-acre quarry property.
4	Sierra Point Hotel and Life Sciences Project	Brisbane	1.9 miles to the southeast	NA	657,620	608 hotel rooms and 20,000 s.f. event space	12-story hotel building and 11-story life sciences building with 1,200 on-site parking spaces in 2-story parking podiums.
Development Projects – City and County of San Francisco							
5	Visitacion Valley and Portola Proactive Traffic Calming Project	San Francisco	NA	NA	NA	NA	Safety project to reduce pedestrian injuries to seniors and people with disabilities, including installation of speed humps and other low-cost traffic calming measures.
6	Baylands North (Schlage Lock Redevelopment Plan)	San Francisco	0.2 miles to the north	1,679	47,000	15,000 s.f. institutional uses	Redevelopment of underutilized properties with residential uses, commercial uses, and cultural, institutional, or educational uses, including restoration and reuse of historic office building.
7	Executive Park Amended Subarea	San Francisco	0.7 miles to the northeast	1,685	NA	NA	Universal Paragon Corporation Development Project. Ocean Landing (5 Thomas Mellon Circle), including demolition of an existing office building and surface parking lot for construction of five residential buildings, two below-grade parking structures, publicly accessible open spaces, new streets, alleyways, and pedestrian walkways.
8	Hunters Point Shipyard-Candlestick Point	San Francisco	2.4 miles to the northeast	9,000	2,000,000	8,000 seat arena	Various redevelopment plans, rezoning, site-specific development projects, and infrastructure for a 778-acre site encompassing Candlestick Point, Hunters Point Shipyard, and India Basin Shoreline.

No.	Project Name	Jurisdiction	Location in Relation to Baylands	Residential Units	Commercial/ Office Square Footage	Other	Description
9	Sunnydale HOPE SF Master Plan	San Francisco	1.2 miles to the northwest	1,700	16,000	66,000 educational facilities	Demolition of the existing Sunnydale public housing complexes (785 residential units) and construction of replacement and new market rate housing, retail uses, 50,000 s.f. of recreation and education facilities, 16,000 s.f. of youth and senior services uses, 1,441 off-street parking spaces, and infrastructure including a new street network.
10	198 Leland Avenue	San Francisco	0.75 miles to the northwest	4	NA	NA	Demolition of an existing commercial building and construction of a 3-story mixed-use building.
11	590 Leland Avenue	San Francisco	1.1 to the northwest	5	NA	NA	Demolition of an existing church for residential use.
Development Projects – City of South San Francisco							
12	494 Forbes Boulevard	San Francisco	3.15 miles to the southeast	NA	326,020	NA	Two 4- to 5-story office/R&D buildings and a 3-level parking structure.
13	499 Forbes Boulevard Office Project	South San Francisco	3.1 miles to the southeast	NA	128,737	NA	5-story office/R&D building with a 4-story parking garage.
14	101 Gull Drive	South San Francisco	2.9 miles to the southeast	NA	166,613	NA	7-story office/R&D building with a 4.5-level parking garage.
15	751 Gateway Boulevard	South San Francisco	2.85 miles to the south	NA	208,000	NA	7-story office/R&D building.
16	328 Roebling Road	South San Francisco	3.2 miles to the south	NA	130,000	NA	Office/R&D building with 3-level parking structure.
17	476 Eccles Avenue	South San Francisco	3.0 miles to the south	NA	262,287	NA	Two 4-story office/R&D buildings and a 5-level parking structure.
18	465 Cabot Road	South San Francisco	3.2 miles to the south	NA	31,765	NA	Office and service center.
19	40 Airport Boulevard	South San Francisco	3.45 miles to the south	292	NA	NA	Residential building.

No.	Project Name	Jurisdiction	Location in Relation to Baylands	Residential Units	Commercial/ Office Square Footage	Other	Description
20	124 Airport Boulevard 100 Produce Avenue	South San Francisco	3.45 miles to the south	310	NA	NA	Two 7-story residential buildings.
21	200 Airport Boulevard	South San Francisco	3.4 miles to the south	94	3,650	NA	7-story mixed-use building with two levels of parking.
22	701 Airport Boulevard	South San Francisco	3.0 miles to the south	NA	NA	131 rooms	5-story hotel.
23	915 Airport Boulevard	South San Francisco	2.7 miles to the south	NA	NA	115 rooms	5-story hotel.
24	Genentech Master Plan	South San Francisco	3.4 miles to the southeast	NA	4,300,000	NA	Expansion of building space within the existing Genentech campus.
25	379 Oyster Point Boulevard (Phase 2C)	South San Francisco	2.75 miles to the southeast	NA	Unknown	NA	Development of city-owned land managed by the Harbor District, including a new pump station, repairs to the landfill clay cap, improved parking areas and landscaping. To complement the planned improvements, a planning effort will take place to set a vision for new land uses in the marina area.
26	379 Oyster Point Boulevard (Phase 2C)	South San Francisco	2.75 miles to the southeast	NA	1,700,000	NA	Office/R&D buildings within the current Oyster Point Business Park.
27	100 East Grand	South San Francisco	3.25 miles to the south	NA	Unknown	NA	New R&D campus, consisting of one 10-story building, one 8-story building, and one 8-story parking garage.
28	121 East Grand	South San Francisco	3.25 miles to the south	NA	940,717	NA	17-story office/R&D building.
29	200–219 East Grand	South San Francisco	3.2 miles to the south	46	6,000	NA	5-story mixed-use development.
30	455 Grand Avenue	South San Francisco	3.6 miles to the southeast	27	2,865	NA	5-story mixed-use building.
31	580 Dubuque	South San Francisco	3.0 miles to the south	NA	213,000	NA	6-story office/R&D building with 4 levels of underground parking.

No.	Project Name	Jurisdiction	Location in Relation to Baylands	Residential Units	Commercial/ Office Square Footage	Other	Description
32	Southline Development (30 Tanforan Avenue)	South San Francisco	4.25 miles to the south	NA	2,700,000	NA	Construction of six office/R&D buildings up to 7 stories in height, below-grade parking, site amenities, open space, and landscaping.
33	Gateway Phase 4 (850–900 Gateway Boulevard)	South San Francisco	2.9 miles to the southeast	NA	182,000	NA	Two office/R&D buildings with a 6-level parking garage.
34	Genesis (One and Two Tower Place)	South San Francisco	2.45 miles to the south	NA	NA	110 rooms	Hotel.
35	418 Linden Avenue	South San Francisco	3.05 miles to the south	38	NA	NA	5-story residential development with mechanical parking lifts.
36	Cadence Phase 2 (405 Cypress Avenue)	South San Francisco	3.1 miles to the south	195	NA	NA	7- to 8-story building with residential and amenity uses.
37	7 South Linden Avenue	South San Francisco	3.45 miles to the south	558	NA	NA	5-story residential building.
38	428 Baden Avenue	South San Francisco	3.15 miles to the south	36	NA	NA	4-story residential building project.
39	Bertolucci's Redevelopment (421 Cypress Avenue)	South San Francisco	3.05 miles to the south	99	1,500	NA	7-story mixed-use building with housing, restaurant, corner plaza, ground-floor parking, and residential amenities.
40	988 El Camino Real	South San Francisco	3,55 miles to the southwest	172	12,000	NA	6-story residential/retail mixed-use building with two levels of subterranean parking.
41	South San Francisco Public Utilities Commission (PUC) Site Development	South San Francisco	3.5 miles to the southwest		Unknown		Proposed mixed-use development and public open space on a portion of the former South San Francisco Public Utilities Commission sites totaling approximately 5.9 acres in the El Camino/Chestnut Avenue Planning Area.
42	Mission and McClellan	South San Francisco	3.5 miles to the southwest	20	6,000	NA	Mixed use residential/retail.
43	800 Dubuque	South San Francisco	2.25 miles to the southwest	NA	900,000	NA	Office, R&D development on 5.9 acres.

No.	Project Name	Jurisdiction	Location in Relation to Baylands	Residential Units	Commercial/ Office Square Footage	Other	Description
44	Healthpeak Vantage	South San Francisco	2.5 miles to the southwest	NA	1,655,202	NA	Office development on 19 acres.
45	Infinite 101	South San Francisco	3.5 miles to the south	NA	669,000	NA	R&D development on 8.7 acres.
46	573 Forbes Blvd.	South San Francisco	2.2 miles to the southeast	NA	316,600	NA	Office, R&D development on 2.8 acres.
47	439 Eccles Ave.	South San Francisco	2.25 miles to the south	NA	436,600	NA	Office, R&D project on 2.6 acres.
48	131 Infinite Court	South San Francisco	3.5 miles to the southwest	NA	1,700,000	NA	R&D, amenities project on 17.67 acres.
49	691–695 Gateway Blvd.	South San Francisco	2.2 miles to the south	NA	294,000	NA	Office, R&D development on 4.4 acres.
50	175 Sylvester Road	South San Francisco	2.7 miles to the southwest	NA	594,247		Office, R&D development on 4.74 acres.
Development Projects – City of Daly City							
51	Cow Palace, 2150 Geneva Avenue	Daly City	0.8 miles to the west	1,700	300,000	NA	This property is owned and operated by the State of California as an indoor arena. Daly City anticipates redevelopment of the Cow Palace and two adjacent properties to include high density residential and multi-story retail/office commercial in a multi-story building.
52	Point Martin Phases 1 and 2	Daly City	1.05 miles to the west	133	NA	NA	Single-family detached housing.
53	Pacific Place Retail Conversion	Daly City	0.95 miles to the west	7	Unknown	NA	Conversion of an existing 9,756 square foot retail space into one additional retail space and residential condominium units at the ground floor level along Geneva Avenue.
54	Templeton Homes	Daly City	2.5 miles to the west	4	NA	NA	Detached 3-story homes.

No.	Project Name	Jurisdiction	Location in Relation to Baylands	Residential Units	Commercial/ Office Square Footage	Other	Description
55	Midway Village Redevelopment	Daly City	0.55 miles to the west	625	NA	NA	Mixed-use development consisting of seven apartment buildings, four walk-up flat buildings, and townhomes in a mix of stand-alone and connected buildings. The new development would also include a new child-care facility, 745 parking spaces, community center, office space for property management, and recreational facilities in a revised street system, together with relocation of David R. Rowe Park.
CUMULATIVE PROJECTS TOTAL				**18,429**	**15,656,994**	**1,322,000 s.f. warehouse 964 hotel rooms 81,000 s.f. institutional/educational uses 8,000 seat arena 20,000 s.f. event space**	
BAYLANDS SPECIFIC PLAN				**2,200**	**6,500,000**	**500,000 s.f. hotel use**	
CUMULATIVE TOTAL				**20,629**	**28,722,643**	**1,322,000 s.f. warehouse 964 hotel rooms + 500,000 s.f. hotel use 81,000 s.f. institutional/educational uses 8,000 seat arena 20,000 s.f. event space**	

ABBREVIATION: N/A = not applicable

7.3 CUMULATIVE IMPACTS OF THE 2025 SPECIFIC PLAN PROJECT IN COMBINATION WITH RELATED PAST, PRESENT, AND REASONABLY FORESEEABLE PROBABLE FUTURE PROJECTS

7.3.1 LAND USE AND PLANNING POLICY

a. Geographic Context and Method of Analysis

The geographic context and method of analysis for cumulative land use and planning policy impacts are identified in **Table 7-3**. The full list of cumulative projects used in list-based analyses is provided in **Table 7-2**. The geographic analysis area used to address the potential for cumulative projects to divide a community encompasses a cluster of development along the US 101 freeway and Bayshore Boulevard stretching from the southern portion of San Francisco through Brisbane and Daly City to the northern portion of South San Francisco.

Table 7-3: Geographic Context and Methodology for Analysis of Cumulative Land Use and Planning Policy Impacts

Impact	Geographic Context	List- or Projections-Based Analysis
Threshold LUP-1 Physically Separate a Neighborhood or Community	Buildout of the Brisbane General Plan and cumulative projects within the City of Brisbane, the San Francisco portion of the San Francisco/San Mateo Bi-County Priority Development Area, and the Oyster Point portion of the City of South San Francisco.	Land development and infrastructure projects, including: • Brisbane (Cumulative Projects 1, 2, 4) • Infrastructure and Remediation Projects (Cumulative Projects A–I) • San Francisco portion of the San Francisco/San Mateo Bi-County Priority Development Area (Cumulative Projects 5–8) • Oyster Point (Cumulative Projects 12–18, 24–26, 29, 33)
Threshold LUP-2 Significant Impacts Resulting from a Conflict with an Applicable Adopted Planning Document	Same as above.	Land development and infrastructure projects, including: • Brisbane (**Table 7-1** projections for General Plan buildout and Cumulative Projects AA, BB, 1–4) • Infrastructure and Remediation Projects (Cumulative Projects A–I) • San Francisco portion of the San Francisco/San Mateo Bi-County Priority Development Area (Cumulative Projects 5–8) • Oyster Point (Cumulative Projects 12–18, 24–26, 29, 33)

Because land use policies are local in nature and specific to the agency adopting such policies, the City of Brisbane is a logical geographic area for analysis of cumulative impacts related to consistency with applicable planning documents since projects within the City would be subject to the same set of planning policies. However, addition of the cluster of development to the north and south of the Baylands within adjacent portions of San Francisco and South San Francisco represents the areas outside of Brisbane where environmental impacts resulting from inconsistencies with local planning policies could combine with related impacts of Baylands

development such that the cluster of development to the north and south of the Baylands are included in the geographic scope for this cumulative impact analysis.

Existing land use in the geographic area for cumulative analysis is described in Section 4.3, *Land Use and Planning Policy*, and represents baseline conditions for evaluation of cumulative impacts.

b. Cumulative Impacts: Would the Baylands Specific Plan, in conjunction with past, present, and probable future projects, result in significant cumulative land use and planning policy impacts?

Past, present, and probable future development would result in substantial changes to existing land use patterns and intensities through conversion of vacant land to residential, office, commercial, and industrial uses, as well as through the conversion of existing developed land to substantially higher intensity residential, office, and mixed-use development. Transportation projects undertaken by local, regional, and state agencies would also facilitate access and mobility for past, present, and probable future land development within the cumulative impact analysis area.

Impact LUP-1: Physically Separate a Neighborhood or Community

Physical barriers within the City of Brisbane and the cumulative analysis geographic area outside of the City include the US 101 freeway, Bayshore Boulevard, the Caltrain right-of-way, Visitacion Creek and the Brisbane Lagoon, large industrial uses such as the Recology San Francisco solid waste management facility, and PG&E's Martin substation. To the west of Bayshore Boulevard, Brisbane lies within a "cove" formed by the hillsides and ridges extending from San Bruno Mountain that separate the community from more highly urbanized areas to the north, west, and south in San Francisco, Daly City, and South San Francisco.[383] Together, these features physically separate the Specific Plan area from adjacent communities in Brisbane and Daly City to the west, in San Francisco to the north, and in South San Francisco to the south of the Baylands. In addition:

- Central Brisbane, the Northeast Ridge, and the existing Brisbane community are physically separated from the Baylands by Bayshore Boulevard;
- Recology and the Martin substation physical separate the existing Brisbane community and the Baylands from existing neighborhoods and large-scale redevelopment project areas to the north in San Francisco;

[383] Guadalupe Canyon Road west from Bayshore Boulevard into Daly City is the only roadway traversing across the hillsides and ridges extending outward from San Bruno Mountain.

- US 101 physically divides the existing Brisbane community and the Baylands west of the freeway from the Sierra Point area east of the freeway; and
- Bayshore Boulevard, the US 101 freeway, and the Brisbane Lagoon physically divide Brisbane from the Oyster Point area to the south in South San Francisco.

Baylands Specific Plan development in combination with the cumulative projects identified in **Table 7-3** would greatly intensify land use within the cumulative analysis area as the result of substantial residential, office, commercial, and industrial development. Future communities would experience decreased connectivity as the result of temporary roadway lane closures and detours during construction of approximately 15,000 new housing units and over 14 million s.f. of new employment-generating uses currently approved and proposed within the Baylands, the San Francisco portion of the San Francisco/San Mateo Bi-County Priority Development Area, and the Oyster Point portion of South San Francisco.

To plan for the transportation facilities needed to support this level of development, the "Bi-County Transportation Study" was undertaken jointly by the San Francisco County Transportation Authority (SFCTA), City/County Association of Governments of San Mateo County, City of Brisbane, City and County of San Francisco, Peninsula Corridor Joint Powers Board (Caltrain), and others. Transportation projects planned as part of the Bi-County Transportation Study, such as the Geneva Avenue extension, Candlestick interchange, bus rapid transit service, and others would maintain connectivity as these areas develop.

Habitat restoration and enhancement projects would occur along existing drainage courses, existing wetland and shoreline areas, and upland habitat areas such as Visitacion Creek, the Levinson Marsh, Brisbane Lagoon, and Icehouse Hills. These activities would occur within existing habitat areas and not create any new physical barriers that would separate communities.

Construction activities associated with land development and infrastructure projects routinely involve temporary disruptions and physical barriers within established communities such as lane or road closures and service delays or detours for bus routes.

Cumulative Impact Conclusion

The Specific Plan's and cumulative development's construction activities would create temporary roadway disruptions and physical barriers that would adversely affect connectivity between communities. Although individual Baylands and cumulative construction projects would each be required to prepare and implement a traffic control plan and related measures to accommodate access during construction, such as designating and maintaining alternate routes, the proximity of cumulative projects to the Baylands could result in multiple temporary disruptions to transportation systems occurring simultaneously. While no single temporary disruption would likely affect connectivity to the extent that communities would be separated

during construction, multiple concurrent disruptions along transportation routes could generate a significant cumulative impact.

Incremental Contribution of Baylands Development to the Significant Cumulative Impact

As demonstrated in Impact LUP-1, Baylands Specific Plan development would maintain access along area roadways at all times during construction, including during peak travel hours. Access to transit and access to bicycle and pedestrian facilities would also be maintained during Baylands development. In addition, by constructing the Geneva Avenue extension and participating in the other improvements outlined in the Bi-County Transportation Study, Baylands Specific Plan development as proposed by the applicant would improve future connectivity in the area.

The 2025 Specific Plan project would not have a cumulatively considerable contribution to a significant cumulative impact related to physical separation of neighborhoods or communities.

Impact LUP-2: Significant Impacts Due to a Conflict with an Applicable Adopted Planning Document

Development projects within Brisbane would be subject to the provisions of the Brisbane General Plan, while cumulative development projects within San Francisco, South San Francisco, and Daly City would be subject to the provisions of those communities' General Plans. Because development projects would be required to be consistent with local General Plan policies, development of the Baylands and other cumulative development projects would not combine to generate significant cumulative impacts resulting from conflicts with the applicable local General Plan or adopted planning policies.

Transportation, infrastructure, and habitat restoration projects would be subject to the requirements of the agency undertaking such projects including any mitigation measures in applicable CEQA documents. Development within areas subject to BCDC jurisdiction would be subject to BCDC permitting authority and would therefore be required to be consistent with the provisions of San Francisco Bay Plan. Such projects would also typically be subject to environmental and planning review.

Transportation projects undertaken by regional and state agencies would not, however, be subject to requirements for consistency with local General Plans. While project-specific environmental documentation for such transportation projects is required to identify significant impacts in relation to conflicts with adopted local plans and policies, if any, and identify mitigation measures, it cannot be concluded that all conflicts between transportation projects and adopted local planning policies would be avoided or that significant cumulative impacts resulting from conflicts with local General Plans and planning policies would be avoided or reduced to less than significant.

Cumulative Impact Conclusion

Because Baylands and cumulative development projects within Brisbane would be subject to the provisions of the Brisbane General Plan, while cumulative development projects within San Francisco, South San Francisco, and Daly City would be subject to the provisions of those communities' General Plans, development of the Baylands and other cumulative development projects would not combine to generate significant cumulative impacts resulting from conflicts with the applicable local General Plan or adopted planning policies.

Transportation, infrastructure, and habitat restoration projects would be subject to the requirements of the agency undertaking such projects including any mitigation measures in applicable CEQA documents. Development within areas subject to BCDC jurisdiction would be subject to BCDC permitting authority and would therefore be required to be consistent with the provisions of San Francisco Bay Plan. Such projects would also typically be subject to environmental and planning review.

Thus, cumulative development projects would be consistent with the provisions of applicable local and regional plans, and a less than significant cumulative impact would result.

7.3.2 POPULATION AND HOUSING

The analysis of cumulative population and housing effects focuses on whether the population and housing effects of the Baylands development in combination with those of past, present, and probable future projects would result in related physical environmental effects.

a. Geographic Context and Method of Analysis

The geographic context and method of analysis for cumulative population and housing impacts is identified in **Table 7-4**. The full list of cumulative projects used in list-based analyses is provided in **Table 7-2**.

Population and housing issues are generally experienced over a broad area, which is reflected in using the nine-county San Francisco Bay region as the geographic area of analysis for most cumulative population and housing impacts. In contrast, cumulative urban decay effects[384] are

[384] "Urban decay" refers to the extensive and widespread physical deterioration of properties or structures in an area caused by a downward spiral of business closures and multiple long-term vacancies. This physical deterioration to properties or structures is so prevalent, substantial, and lasting for a significant period of time that it impairs the proper utilization of the properties or structures, along with the health, safety, and welfare of the surrounding community. The manifestations of urban decay include such visible conditions as plywood-boarded doors and windows, uncontrolled truck parking, long-term unauthorized use of the properties and parking lots, graffiti, dumping of refuse on-site, overturned dumpsters, broken parking barriers, broken glass, dead trees and shrubbery together with weeds, lack of building maintenance, abandonment of multiple buildings, and unsightly and dilapidated fencing.

more limited to smaller market areas for specific types of uses (e.g., retail, life science/office development).

Table 7-4: Geographic Context and Methodology for Analysis of Cumulative Population and Housing Impacts

	Geographic Context	List- or Projections-Based Analysis
Impact POP-1 **Unplanned Growth**	Nine-county San Francisco Bay Area region.	Projections-based analysis of land development and infrastructure identified in Plan Bay Area 2050.
Impact POP-2 **Displace Existing Housing or Businesses**	Nine-county San Francisco Bay Area region.	Projections-based analysis of land development and infrastructure identified in Plan Bay Area 2050.
Impact POP-3 **Housing for all Economic Segments of the Community**	City of Brisbane.	List-based analysis, including the following projects in addition to the Baylands Specific Plan: • Brisbane General Plan and Housing Element (Cumulative Projects AA, BB)
Impact POP-4 **Urban Decay** New development attracting business from older areas	Lands within and adjacent to the Baylands.	List-based analysis, including the following projects in addition to the Baylands Specific Plan: • Brisbane General Plan and Housing Element (Cumulative Projects AA, BB, 1, 2, 4) • San Francisco portion of the San Francisco/San Mateo Bi-County Priority Development Area (Cumulative Projects 5–8) • Oyster Point (Cumulative Projects 12–18, 24–26, 29, 33)
Lack of investment and maintenance in anticipation of redevelopment	Nine-county San Francisco Bay Area region.	Projections-based analysis of land development and infrastructure identified in Plan Bay Area 2050.

b. Cumulative Impacts: Would the Baylands Specific Plan, in conjunction with past, present, and probable future projects, result in significant cumulative population and housing effects?

Impact POP-1: Significant Physical Environmental Impacts Resulting from Unplanned Growth

The approved regional housing and employment growth forecast used for Plan Bay Area 2050 indicates that the San Francisco Bay Area will grow by 2.7 million people to a population of 10.3 million in 2050. The regional growth forecast also projects that employment will grow by 1.4 million to just over 5.4 million total jobs by 2050.

Government Code Section 65080(b)(2)(B)(ii) requires the regional growth forecast used for the Bay Area's Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) to accommodate expected population growth, household formation, and employment growth of the region. The regional growth forecast also accounts for all economic segments (i.e., very low, low, moderate, and above moderate income households) and net migration into the region. Thus, population and employment growth within the nine-county Bay Area region as a whole

would not be expected to exceed projections through 2050. However, because neither of the two agencies that prepared and approved regional socioeconomic projections – the Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG) – have land use authority, the resulting pattern of future housing, commercial, and industrial development could vary widely on a localized basis from the assumptions contained in the Regional Transportation Plan/Sustainable Communities Strategy. Shifts in land use patterns and development intensities away from the assumptions contained in Plan Bay Area 2050 could encompass numerous individual development projects that would exceed existing local General Plan buildout, even though the Bay Area's total population, housing, and employment growth would not exceed regional projections.

Cumulative Impact Conclusion

Individual future development projects could include amendments to existing local General Plans that may modify land use patterns or increase a community's buildout. However, Plan Bay Area 2050's regional population and employment growth projections are based on socioeconomic and market modeling that are not likely to be exceeded regionwide even if local shifts in land use patterns occur compared to the exact land use inputs that were used to project population and employment growth over the next 15-25 years. Thus, unplanned growth exceeding regional projections would not occur and a less than significant cumulative impact would result.

Impact POP-2: Displace Existing Housing or Businesses

As noted above, the most recent approved regional growth forecast indicates that the Bay Area will grow by 2.7 million people (1.5 million new housing units) and 1.4 million jobs between 2015 and 2050. While some of this growth would be accommodated by conversion of existing open space and agricultural lands within the nine-county Bay Area to urban development, Plan Bay Area 2050 sets forth strategies to concentrate future development and focus future growth within 216 locally nominated "Priority Development Areas (PDAs) and 36 locally nominated Priority Production Areas (PPAs) as well as other existing urban areas.[385] These Priority Development Areas typically consist of existing low- to moderate-intensity urbanized development in proximity to transit with the capability of supporting substantially higher intensity development.

Regional growth projections for 1.5 million new housing units along with 1.4 million new jobs thus anticipate growth to occur primarily within existing built-up urban areas. Substantial redevelopment of sites with existing housing and employment-generating uses is expected to occur through 2050, resulting in localized displacement of households and businesses and

[385] Approximately 69 percent of the region's land use growth footprint is projected to occur within existing urban and built-up lands, including 46 percent of the region's land use growth footprint occurring within PDAs.

requiring construction of replacement housing and buildings for commercial, office, and industrial businesses.

Cumulative Impact Conclusion

The majority of the region's land use growth footprint is projected to occur within existing urban and built-up lands, including 46 percent of the region's land use growth footprint occurring within identified areas of existing low- to moderate-intensity development in proximity to transit designated as PDAs due to their capability of supporting substantially higher intensity development. To accommodate 1.5 million new housing units and 1.4 million jobs between 2015 and 2050, 46 percent of which is projected to occur within areas of existing low- to moderate-intensity development, substantial displacement will occur, necessitating substantial replacement housing and employment-generating development. Thus, a significant cumulative physical environmental impact would result and are addressed throughout this chapter.

Incremental Contribution of Baylands Development to the Significant Cumulative Impact

The 2025 Specific Plan project would not have a cumulatively considerable contribution to a significant cumulative environmental impact related to displacement of existing housing or businesses for the following reasons:

- Development of the proposed 2,200 dwelling units, 6.5 million square feet of commercial development, and 500,000 square feet of hotel use within the Baylands rather than elsewhere within San Francisco and San Mateo counties would substantially reduce regional vehicle miles traveled, which would reduce regional air pollutant and GHG emissions.
- No existing housing would be displaced from the Baylands.
- Although approximately 231,400 s.f. of existing industrial businesses within the Baylands would be displaced, as indicated in the Baylands urban decay study (Appendix C), as of November 2022, there was more than 2.6 million s.f. of vacant industrial space within Brisbane and adjacent communities and more than 6.3 million s.f. of vacant industrial space within San Francisco and San Mateo counties. As a result, displacement of industrial businesses from the Specific Plan area would not necessitate new construction for which significant physical environmental impacts would occur.
- All off-site infrastructure associated with Baylands development would be located within existing roadway rights-of-way.
- Existing grades and roadway access to business within or adjacent to the Specific Plan area would be maintained at all times through Baylands development.

- While Baylands development would displace Golden State Lumber's laydown area and its ability to receive and ship lumber by rail, adversely affecting its business operations, the resulting economic effects would not constitute a physical environmental effect as defined by CEQA. The Specific Plan would not therefore contribute to a cumulative physical environmental effect.

Impact POP-3: Housing for all Economic Segments of the Community

Baylands development, in combination with development of the housing sites identified in the City's General Plan, including the Housing Element, would provide adequate opportunities for the production of housing for all economic segments of the community as defined in the Regional Housing Needs Assessment for 2023-2031. No significant cumulative impact would therefore result.

Impact POP-4: Urban Decay

As noted in Draft EIR Section 4.4, urban decay is characterized by visible symptoms of physical deterioration caused by a downward spiral of business closures and long-term vacancies. In a region such as the Bay Area that will experience substantial growth, urban decay could occur as the result of:

- Buildings in older areas reaching the end of their useful lives.
- Development of new commercial and employment-generating uses designed to meet current market demands attracting business movement from areas with older buildings and development not as well suited to current needs; or
- Lack of investment and maintenance within areas of low- to moderate-intensity development in anticipation of opportunities for redevelopment at higher intensities.

Buildings in Older Areas Reaching the End of Their Useful Lives

Deterioration of older buildings and areas containing such buildings is possible simply because buildings reach the end of their useful lives. This represents a "natural" cycle of development, activity, and decay that can ultimately lead to improvements or replacement of older buildings with similar or different uses and development intensities. Urban decay of this type is not "caused" by redevelopment activities. Instead, in such cases, redevelopment is "caused" by the decay of older areas. Thus, this type of urban decay would not be caused by Baylands or cumulative development.

Development of New Commercial and Employment-Generating Uses Attracting Business Movement from Areas with Older Buildings and Development Not Well Suited to Current Needs

New development can cause decay of older urban areas by introducing new buildings, commercial and office centers, and neighborhoods better suited to contemporary lifestyles, retail demand, or offices, leading to abandonment of older buildings and areas or driving rents down such that maintenance may be deferred and decay occurs. In such cases, new development can be said to cause urban decay.

Cumulative Retail Development

A cumulative retail supply and demand analysis (including the Specific Plan) was conducted as part of the urban decay study undertaken for the Baylands (Appendix C). **Table 7-5** and **Table 7-6** summarize occupied retail supply and demand for the Baylands and cumulative retail projects in the Baylands' retail market area.

Table 7-5: Summary of Cumulative Project Retail Space and Retail Demand Generators within the Baylands Retail Market Area

Development Status	Retail s.f.	Residential Units	Hotel Rooms	Office/Life Science s.f.
Under Construction	147,050	5,708	0	720,000
Approved	793,000	13,606	225	0
Under Review	3,700	820	958	657,620
Cumulative Projects Total	942,750	20,134	1,183	1,377,620
Cumulative Projects Total in Retail Market Area	50,400	2,234	608	657,620
Baylands	102,200	2,200	800	6,500,000
Baylands Plus Cumulative Projects Total in Retail Market Area	152,600	4,434	1,408	7,157,620

SOURCE: ALH Urban and Regional Economics, *The Baylands Urban Decay Analysis*, July 2023.

Table 7-6: Baylands and Cumulative Retail Market Area Demand Capture Rate

Retail Supply and Demand Characteristic	
Baylands Proposed Retail Space (Occupied)	91,980
Retail Market Area Cumulative Retail Supply (Occupied)	50,400
Vacancy Rate	10%
Total New Market Area Cumulative Retail Supply (Occupied)	137,340
Total New Market Area Supportable Square Feet	1,067,057
Baylands and Cumulative Retail Demand Capture Rate	12.9%
Demand Remaining for Other Retail Venues (s.f.)	929,717

SOURCE: ALH Urban and Regional Economics, *The Baylands Urban Decay Analysis*, July 2023.

The cumulative retail analysis results indicate that assuming all cumulative retail projects are developed within the same time horizon as the Baylands, they will require a 12.9 percent capture rate[386] of new brick and mortar retail demand to achieve a 90 percent occupancy rate. This is a relatively low capture rate, leaving almost an additional 1.0 million s.f. of demand available for other local and regional retail venues. This suggests that not only will existing retail outlets not experience any negative sales impacts due to development of the Baylands in combination with cumulative retail projects, but that additional demand will be generated to support a range of existing retail and service providers.

Cumulative Office/Life Science Development

Projected demand in San Mateo County totals approximately 17.4 million s.f. through 2050. The planned supply among all the projects identified in the office/life science market area, including the Baylands, totals approximately 28.96 million s.f. Thus, potential supply in just Brisbane and South San Francisco (plus Hunters Point in San Francisco) exceeds projected countywide demand by 66 percent. This assumes all planned projects materialize, which may not be the case given the potential for a significant oversupply of space.

With this potential surplus of supply, it is reasonable to conclude that some projects that are not currently under construction (i.e., approved or under review) would not move forward until such time as demand supports their construction and project sponsors had a major tenant commitment for space. The Baylands urban decay technical analysis (EIR Appendix C) concluded this is a reasonable scenario since most of the future supply projects are sponsored by well-established corporate developer-investors. These developers would likely keep a close watch on economic and market conditions and time their projects such that the completed office/life science buildings would not sit empty for an extended period of time following construction.

Another possible scenario is that demand exceeds the study projection and is generated in sufficient volume to absorb the planned supply. The urban decay analysis for the Baylands conservatively assumed that San Mateo County would retain its current capture rate of Bay Area life science employment. A more aggressive assumption of a 34 percent capture rate as previously noted, which is the midpoint of the 28–40 percent capture rate range analyzed in the Baylands urban decay study, would support an additional 4.1 million s.f. of space in San Mateo County. However, other considerations, such as the cost of real estate in San Mateo County, limited housing production, and regional traffic congestion, suggest that this scenario is less likely.

While the potential cumulative supply of space is extensive, much of the future development would only take place when there is sufficient demand. Existing under-construction buildings would serve as indicators over time for developers to determine whether future development

[386] "Capture rate," as a real estate market term, refers to the percentage of individuals who take a desired action out of the total number of people who had the opportunity to do so. In the context of retail market sales and **Table 7-7**, a 12/9% capture rate means the percentage of total retail sales by Baylands and cumulative project residents, employees, and businesses within the Baylands' retail market area who make a purchase within the Baylands.

would proceed or be delayed until demand catches up with supply. Thus, urban deterioration or decay would not result from the combination of Baylands and cumulative office/life science development.

Lack of Investment and Maintenance within Low- to Moderate-Intensity Development in Anticipation of Opportunities for Redevelopment at Higher Intensities

A third type of urban decay results from planning rather than actual development and construction of new buildings. For example, Plan Bay Area 2050 and local General Plans throughout the nine-county Bay Area emphasize infill development, and in particular, intensifying development within existing urban areas in proximity to transit. While guiding approximately 69 percent of the region's planned land use growth footprint to existing urban and built-up lands, including 46 percent of the region's land use growth footprint to identified Priority Development Areas,[387] is critical to reducing greenhouse gas emissions and traffic from new development, such policies could also act as a disincentive for investment in some older, low- to moderate-intensity areas in advance of actual development of the substantially higher intensity transit-oriented infill uses planned for such areas.

Cumulative Impact Conclusion

Cumulative development would result in a less than significant cumulative urban decay impact for the following reasons:

- Deterioration of older buildings and areas containing such buildings occurs as buildings reach the end of their useful lives as part of a "natural" cycle of development, activity, and decay that can ultimately lead to improvements or replacement of older buildings. Urban decay of this type is not "caused" by redevelopment activities. In such cases, redevelopment is "caused" by the natural decay of older areas.
- Although a surplus of supply compared to demand would result if all proposed office/life science projects were to be developed, the most likely scenario is that projects that are not currently under construction (i.e., approved or under review) would be delayed until such time as demand supports their construction and project sponsors had a major tenant commitment for space. This is a reasonable scenario as most of the future supply projects are sponsored by well-established corporate developer-investors.
- Baylands and cumulative development would generate more demand for retail space than such projects propose to provide.
- While regional growth strategies could act as a disincentive for investment in some older, low- to moderate-intensity areas in advance of actual development of the

[387] Priority Development Areas typically consist of existing low- to moderate-intensity development in proximity to transit and are designated as PDAs due to their capability of supporting substantially higher intensity development.

substantially higher intensity transit-oriented infill uses planned for such areas, the Baylands Specific Plan proposes redevelopment of a largely undeveloped site and would not contribute to this potential cause of urban decay.

7.3.3 AESTHETICS AND VISUAL RESOURCES

a. Geographic Context and Method of Analysis

The geographic context and methodology of analysis for cumulative aesthetics and scenic resources impacts are identified in **Table 7-7**. The full list of cumulative projects used in list-based analyses is provided in **Table 7-2**.

b. Cumulative Impacts: Would the Baylands Specific Plan, in conjunction with past, present, and probable future projects, result in significant cumulative aesthetics and visual resources effects?

Impact AES-1: Public Views of Identified Scenic Resources (San Bruno Mountain and Adjacent Ridgelines, San Francisco Bay, and the Brisbane Lagoon), Including Those within a State Scenic Highway

Effects on scenic vistas relate to development having sufficient building intensity and height that could obscure scenic vistas available to the public. Cumulative effects on scenic vistas result when multiple projects combine to either (1) increase the amount of scenic vista that is obscured from view at a single vantage point available to the public, or (2) substantially reduce the number or area of publicly accessible locations with views of an unobstructed scenic vista.

Construction activities associated with the Baylands in combination with cumulative projects would introduce elements that may be considered visually intrusive (e.g., cranes, backhoes, staging areas, and stockpiling of soil and construction materials) within scenic vistas. However, construction equipment and stockpiles would not generally be sufficiently large or bulky to block views of scenic vistas. The presence of construction equipment for specific land development, transportation, and other projects would generally be temporary in nature, dispersed at any given time, and unlikely to occur in concentrations sufficient to substantially increase blockage of scenic views.

The cumulative effect of proposed and anticipated building heights of the Baylands Specific Plan and adjacent cumulative projects to the north would be to partially block existing views of natural hillside areas from the US 101 freeway and adjacent portions of San Francisco Bay by placing a substantial amount of urban development in the foreground of these scenic vistas. In addition, Baylands development, as well as cumulative projects, would be placed in the

Table 7-7: Geographic Context and Methodology for Analysis of Cumulative Aesthetics and Visual Resource Impacts

	Geographic Context	List- or Projections-Based Analysis
Impact AES-1 Scenic Vistas	Areas with scenic vistas that have the Baylands site and at least one other cumulative project in the foreground or middle ground.	List-based analysis, including the following projects in addition to the Baylands Specific Plan: • Brisbane (Cumulative Projects 1, 2, 4) • Infrastructure and Remediation Projects (Cumulative Projects A, B, C, D, E, I, L) • San Francisco portion of the San Francisco/San Mateo Bi-County Priority Development Area (Cumulative Projects 5–8)
Impact AES-2 Impacts to Scenic Resources	Areas containing scenic resources that are either visible from the Baylands or within scenic vistas that have the Baylands site in the foreground or middle ground.	List-based analysis, including the following projects in addition to the Baylands Specific Plan: • Infrastructure and Remediation Projects (Cumulative Projects C, L)
Impact AES-3 Consistency with Visual Quality-Related Policies and Programs	Nine-county San Francisco Bay Area region.	Projections-based analysis of land development and infrastructure identified in Plan Bay Area 2050.
Threshold AES-4 Nighttime Lighting		
Light Trespass	Lands within and adjacent to the Baylands with the potential for light trespass onto common properties, roadways, or highways.	List-based analysis, including the following projects in addition to the Baylands Specific Plan: • Infrastructure and Remediation Projects (Cumulative Projects C, D, E, I) • San Francisco portion of the San Francisco/San Mateo Bi-County Priority Development Area (Cumulative Projects 6, 7)
Dark Night Sky	Nine-county San Francisco Bay Area region.	• Projections-based analysis of land development and infrastructure identified in Plan Bay Area 2050.
Impact AES-5 Glare	Lands within and adjacent to the Baylands with the potential for causing glare on common properties, roadways, or highways	List-based analysis, including the following projects in addition to the Baylands Specific Plan: • Brisbane (Cumulative Projects 1, 2, 4) • Infrastructure and Remediation Projects (Cumulative Projects A, B, C, D, E, H, I) • San Francisco portion of the San Francisco/San Mateo Bi-County Priority Development Area (Cumulative Projects 5–7)

foreground of blue water views of San Francisco Bay and views of the Oakland Hills beyond from locations along public roadways within Brisbane's hillside residential areas, Visitacion Valley, and John McLaren Park.

Cumulative Impact Conclusion

As documented in **Table 4.5-2o**, Baylands development would be within the middle ground of views from the northern portion of the Sierra Point area. However, Cumulative Projects 1, 2, and 4 within the Sierra Point area would not combine with Baylands development to block scenic vistas of San Bruno Mountain or the San Francisco Bay to a greater degree than would

Baylands development alone. The only vista points that would have both Baylands and Cumulative Projects 1, 2, or 4 in the same view would be from within Sierra Point, in which case Sierra Point development would be predominant and obscure project-level impacts of Baylands development.

In addition, development to the north in the San Francisco portion of the Bi-County Priority Development Area and to the south in the Oyster Point area of South San Francisco either would not be of a sufficient height and scale to combine with Baylands development to block identified scenic vistas or would be in a location where there would be no public viewpoint from which both the Baylands and a cumulative project would combine to block views of a scenic vista.

Thus, the 2025 Specific Plan project would not combine with other past, present, and reasonably foreseeable probable future development to generate a significant cumulative impact.

Impact AES-2: Impacts to Scenic Resources, Including Those within Scenic Highways

Construction Equipment and Activities

Although construction activities associated with the Baylands and cumulative projects would not block scenic vistas, they can be expected to introduce elements that may be considered to be visually intrusive (e.g., cranes, backhoes, staging areas, and stockpiling of soil and construction materials) in the foreground of views of scenic resources such as San Francisco Bay and San Bruno Mountain and its adjacent ridgelines, thereby temporarily reducing the visual quality of those resources. However, the only views of Baylands construction equipment and activities that could occur simultaneously with those of a cumulative project would be Cumulative Projects 1, 2, and 4 within the Sierra Point area. Although Baylands construction would occur over a 20- to 30-year period, construction activities associated with Cumulative Projects 1, 2, and 4 would be located approximately 1.5 miles from the Baylands and occur on sites far smaller than construction sites within the Baylands. As a result, Baylands and Sierra Point construction activities would not combine to substantially degrade the visual quality of views of scenic resources.

Long-Term Impacts to Scenic Resources

In addition to the potential for partially blocking scenic vistas, the cumulative effect of Baylands development in combination with cumulative projects would be to place a substantial amount of urban development and transportation infrastructure in the foreground of public views of San Francisco Bay and the Oakland Hills beyond. In addition, Baylands development in combination with cumulative projects would place urban development in the foreground of long-distance views of San Bruno Mountain and San Francisco from the US 101 freeway.

Cumulative Impact Conclusion

The Baylands site is not within or visible from any existing eligible or official scenic highway and would therefore not contribute to any impacts to scenic resources within a scenic highway.[388] Cumulative projects would not involve any substantial alteration to a scenic resource that would also be altered by Baylands development, nor would Baylands and cumulative project construction activities substantially degrade the visual quality of scenic resources.

As a result, the 2025 Specific Plan project would not combine with past, present, and reasonably foreseeable probable future cumulative development to cumulatively cause substantial damage to a scenic resource.

Impact AES-3: Consistency with Visual Quality-Related Policies and Programs

The General Plans of the cities and counties within the nine-county San Francisco Bay Area are designed to accommodate the people, households, and jobs each agency proposes be developed through the community's buildout. The cumulative effect of such development could create new or exacerbate existing adverse effects on the visual character of existing communities. Overall, the greatest adverse effects would result from the conversion of open space resources and suburban style development with high intensity residential, mixed use, and non-residential development projects. Development outside of existing urban areas could introduce dense compact development that would be visually incompatible with the existing character of adjacent lands and individual communities.

Each jurisdiction within the Bay Area maintains policies (e.g., general plan), regulations (e.g., zoning), and other guidance (e.g., design guidelines) that control the size and scale of new development and directly or indirectly address visual compatibility with the natural and built environments. General Plan, zoning, and other development standards are applied to development projects as part of their planning review processes. However, the effectiveness of these policies, regulations, and guidance can vary widely. Depending on the extent to which the intensity, densities, and building heights of new development are greater than those within the surrounding community, substantial short-term disruptions of the local character of existing communities can occur as planned growth expands onto open lands and areas transition from lower to higher intensity use.

Cumulative Impact Conclusion

Because the Plan Bay Area 2050 EIR sustainable communities strategy proposes increasing the density and intensity of growth within designated growth geographies to a level greater than currently planned by local agencies, particularly in less urbanized areas, a significant

[388] The nearest designated Scenic Highway is the Interstate 280 freeway (I-280), approximately four miles to the west. San Bruno Mountain and the adjacent ridgeline block views between the Baylands and the I-280 scenic corridor.

cumulative impact in relation to visual character and quality impacts would occur. In addition, transportation projects undertaken by regional and state agencies would not be subject to requirements for consistency with local visual quality-related standards.

Required planning reviews for land development projects ensure compliance with applicable visual quality-related local plans and policies. However, while environmental documentation for transportation projects would identify significant impacts in relation to conflicts with adopted visual quality-related local plans and policies, transportation agencies would not necessarily require compliance with the visual quality plans and policies of local cities and counties. As a result, visual conflicts between transportation projects and adopted local visual quality standards could occur, and significant environmental cumulative impacts would not necessarily be avoided or reduced to less than significant. Thus, a significant cumulative impact in relation to transportation projects would result.

The 2025 Specific Plan project, which would be required to comply with applicable visual quality-related plans and policies, would not contribute to this significant cumulative impact.

Impact AES-4: Nighttime Lighting

Development of Baylands and cumulative residential, office, commercial, and industrial projects to accommodate nearly 1.4 million new households and 1.4 million new jobs would create substantial new sources of indoor and outdoor lighting, including street lighting, building illumination, security lighting, parking lot lighting, and landscape, park, and trail lighting, as well as light emanating from building interiors passing through windows in new or redeveloped residential and non-residential buildings.

Light Trespass

As discussed in Section 4.5, *Aesthetic and Visual Resources*, Baylands development is subject to light trespass mitigation requirements that would eliminate light trespass from the Baylands onto adjacent properties. As such, Baylands development would not contribute to any cumulative light trespass impacts.

Dark Night Sky

Baylands development, in combination with past, present, and reasonably foreseeable probable future cumulative development would generate nighttime lighting over a broad area. To address dark night sky preservation, the City of Brisbane adopted Municipal Code Chapter 15.88 to establish quantitative standards to reduce nighttime lighting impacts while providing the lighting necessary to ensure community safety and security. While development and transportation projects not subject to the City's nighttime lighting standards may include strategies to direct night lighting downward instead of up to the sky, such standards are also not typically explicit enough to prevent incremental contributions to brightening of the night

sky. As a result, cumulative development within the nine-county Bay Area would include projects generating lighting in excess of the guidelines set forth by DarkSky International, formerly the International Dark Sky Association, thereby brightening the night sky.

Cumulative Impact Conclusion

Nighttime lighting from cumulative development throughout the Bay Area would be of a sufficient scale so as to combine with Baylands development to brighten the night sky and a significant cumulative impact would result.

Cumulative impacts related to light trespass would occur where Baylands development, as well as one or more past, present, or future projects, would result in light trespass onto a common receptor. Because of the location of the Baylands in relation to such other projects, a cumulative light trespass impact would only occur through the combination of the Baylands and Sierra Point projects spilling nighttime lighting onto the US 101 freeway. However, EIR mitigation measures are being applied to each of these projects that would prevent the three projects' nighttime lighting from spilling onto the freeway, and a less than significant cumulative impact would result in relation to light trespass.

Incremental Contribution of Baylands Development to the Significant Cumulative Impact

Because Baylands mitigation measures for nighttime lighting would apply the standards from the City's Municipal Code to the Baylands along with other recommendation of DarkSky International, the 2025 Specific Plan project would not have a cumulatively considerable contribution to a significant cumulative impact related to sky glow.

Impact AES-5: Glare

The large amount of development represented by Baylands development in combination with cumulative projects would create a substantial amount of building and structural surfaces that could generate glare. While mitigation consisting of non-glare building surfaces is available for each project, such mitigation measures cannot be assumed to be uniformly applied to all projects; therefore, some reflective surfaces generating glare would be constructed.

Cumulative Impact Conclusion

Cumulative impacts related to glare would occur where Baylands development, as well as one or more past, present, or future projects, would simultaneously cast glare onto a common receptor. Because of the location of the Baylands in relation to such other projects, a cumulative glare impact would only occur through the combination of the Baylands and Sierra Point projects projecting glare onto the US 101 freeway or onto Brisbane housing overlooking these sites. However, EIR mitigation measures are being applied to the Baylands Specific Plan that

would require implementation of non-reflective surfaces and prevent glare impacts.[389] Baylands development would therefore not combine with Sierra Point projects to reflect glare onto the US 101 freeway or onto Brisbane housing overlooking these sites. Thus, a less than significant cumulative impact would result.

7.3.4 BIOLOGICAL RESOURCES

a. Geographic Context and Method of Analysis

The geographic context and methodology of analysis for cumulative biological resources impacts are identified in **Table 7-8**. The full list of cumulative projects used in list-based analyses is provided in **Table 7-2**.

Table 7-8: Geographic Context and Methodology for Analysis of Cumulative Biological Resources Impacts

	Geographic Context	List- or Projections-Based Analysis
Impact BIO-1 Special-Status Species and Habitats	Brisbane city limits, lands adjacent to the Baylands, habitat areas that are biologically linked to the Baylands, and ecologically similar areas throughout the San Francisco Peninsula that are within a five-mile radius of the Baylands.	List-based analysis, including the following projects in addition to the Baylands Specific Plan: • Brisbane (**Table 7-1** projections for General Plan buildout and Cumulative Projects AA, BB, 1–4) • Infrastructure and Remediation Projects (Cumulative Projects A, B, D, E, I, L) • San Francisco portion of the San Francisco/San Mateo Bi-County Priority Development Area (Cumulative Projects 6–8) • Oyster Point (Cumulative Projects 25, 26)
Impact BIO-2 Freshwater Habitats and Jurisdictional Waters	Habitat areas that are biologically linked to the Baylands and ecologically similar areas throughout the San Francisco Peninsula.	Projections-based analysis of land development and infrastructure identified in Plan Bay Area 2050.
Impact BIO-3 Wildlife Movement	Habitat areas that are biologically linked to the Baylands.	List-based analysis, including the following projects in addition to the Baylands Specific Plan: • Infrastructure and Remediation Projects (Cumulative Projects C, F, G, I, L)
Impact BIO-4 Loss of Protected Trees	Brisbane city limits.	List-based analysis, including the following projects in addition to the Baylands Specific Plan: • Brisbane (**Table 7-1** projections for General Plan buildout and Cumulative Projects AA, BB, 1–4) • Infrastructure and Remediation Projects (Cumulative Projects A-I)
Impact BIO-5	Brisbane city limits and lands biologically linked to the San Bruno Mountain Park.	List-based analysis, including the following projects in addition to the Baylands Specific Plan:

[389] Cumulative Projects 2 and 3 within the Sierra Point area will both have an EIR prepared to analyze environmental impacts. While it is reasonable to expect that any glare impacts identified for either of these projects would be mitigated, such mitigation cannot be assumed at this time.

	Geographic Context	List- or Projections-Based Analysis
Consistency with Conservation Plans and Ordinances		• Guadalupe Quarry Redevelopment Project (Brisbane Cumulative Project 3)

b. Cumulative Impacts: Would the Baylands Specific Plan, in conjunction with past, present, and probable future projects, result in significant cumulative biological resources impacts?

Impact BIO-1: Special-Status Species and Habitats

Development of the Baylands and cumulative projects would involve removal and/or modification of areas that have the potential to contain special-status species and sensitive natural communities (wetlands and non-wetland waters are discussed in a separate impact statement below). As development continues in and around the Baylands, habitats connected to the Baylands, and biologically similar areas throughout the San Francisco Peninsula that are within five miles of the Baylands would have localized effects on special-status species including the temporary and permanent removal or conversion of vegetation and habitat, direct mortality of special-status plants and wildlife, entrapment of wildlife in open trenches, and general disturbance due to noise or vibration during pile driving, earthmoving, and other construction activities for species present in disturbance areas. Construction-generated fugitive dust accumulation on surrounding vegetation and construction-related erosion, runoff, and sedimentation could degrade the quality of adjacent vegetation communities, affecting their ability to support special-status plants and wildlife. Habitat fragmentation and disruption of migratory corridors could also occur on a local level, potentially affecting local populations by making them more vulnerable to extirpation.

Cumulative Impact Conclusion

Although more mobile species might be able to survive continuing habitat loss by relocating to new areas, wildlife movement corridors are limited, and less mobile species would more likely be lost since remaining habitats would be largely limited to existing preservation areas. As a result, the availability and accessibility of remaining natural habitats can be expected to dwindle over time with smaller disjunct habitat areas being preserved within individual development sites. Such disjunct preservation areas might not be able to support plant or animal populations at their pre-development carrying capacities. Thus, the 2025 Specific Plan project and cumulative development would cause loss of sensitive plant and wildlife habitat areas, and a significant cumulative impact on special-status species and their habitats would result.

Incremental Contribution of Baylands Development to the Significant Cumulative Impact

The 2025 Specific Plan project would not have a cumulatively considerable contribution to a significant cumulative impact on related to special-status species. As described in Section 4.6, *Biological Resources*, the Specific Plan and EIR mitigation measures provide for extensive habitat restoration and enhancement along Visitacion Creek and the north shore of the lagoon that would result in higher quality habitat than now exists. In addition, the Specific Plan would preserve and enhance habitat for sensitive butterfly host and nectar plants on Icehouse Hill.

Impact BIO-2: Freshwater Habitats (e.g., Seasonal Wetlands, Riparian Habitat); Tidally Influenced Habitats, Waters of the U.S., Waters of the State, or Any Area Subject to the Jurisdiction of the State lands Commission or Bay Conservation and Development Commission

Wetland and jurisdictional waters restoration projects within the Bay Area are extensive. Although these restoration projects are attempting to reduce the cumulative loss of wetland and waters habitats, the large historical loss of these areas due to past projects, including construction of US Highway 101, has resulted in a loss of more than 90 percent of historic tidal wetlands in the San Francisco Bay Area along with substantial loss of other wetlands and jurisdictional waters. The Plan Bay Area 2050 EIR indicates that development within San Francisco and San Mateo counties would result in loss of state- or federally protected jurisdictional waters, including wetlands, "other waters" (e.g., streams, rivers, lakes, San Francisco Bay), and riparian habitat (see **Table 7-9**).

Cumulative Impact Conclusion

Cumulative development within the San Francisco Peninsula would result in a substantial loss; however, both the U.S. Department of Fish and Wildlife and the California Department of Fish and Wildlife maintain a zero net loss policy for wetlands and jurisdictional waters. Thus, because impacts to wetlands and jurisdictional waters are subject to federal and/or state permits, mitigation measures would be required such that no net loss of wetlands and jurisdictional waters would ultimately result from future development and transportation projects.

Although existing habitat areas along Visitacion Creek and the north shore of Brisbane Lagoon would be removed by grading necessary for required site remediation, final landfill closure, creation of development pads that are protected from flooding and sea level rise, and proposed recreational trail and facilities, the Specific Plan in combination with EIR mitigation measures would result in equivalent or greater wetland and non-wetland waters in relation to acreage and habitat values and functions.

Thus, no significant cumulative impact would result to which the Baylands Specific Plan might contribute.

Table 7-9: Projected Land Use Growth within San Francisco and San Mateo County Wetland Areas (in acres)

	San Mateo County	San Francisco County	TOTAL
Estuarine and Marine Deepwater			
County Total	40	6	**46**
Within Transit Priority Areas	20	2	**22**
Estuarine and Marine Wetland			
County Total	10	5	**15**
Within Transit Priority Areas	1	<1	**<2**
Freshwater Emergent Wetlands			
County Total	20	<1	**<21**
Within Transit Priority Areas	7	<1	**<8**
Freshwater Forested/Shrub Wetland			
County Total	20	0	**20**
Within Transit Priority Areas	7	0	**7**
Freshwater Pond			
County Total	30	5	**35**
Within Transit Priority Areas	4	5	**9**
Lake			
County Total	9	0	**9**
Within Transit Priority Areas	0	0	**0**
Riverine			
County Total	10	<1	**<11**
Within Transit Priority Areas	6	<1	**<7**

SOURCE: ABAG/MTC, Plan Bay Area 2050 EIR, June 2021.

NOTE: "Cumulative projects" include land development and transportation projects along the San Francisco Bay shoreline that would affect protected wetlands or jurisdictional waters, either adversely (i.e., development projects) or beneficially (i.e., restoration as part of development).

Impact BIO-3: Wildlife Movement

Baylands development would not contribute to a significant cumulative wildlife movement impact in relation to terrestrial species due to the presence of existing barriers such as railroads and major roads, as well as industrial uses to the north that limit the current use of the Baylands site as a corridor for aquatic or terrestrial wildlife movement to other properties. Open space areas in the vicinity of the Baylands that support wildlife populations and attract wildlife movement include the San Bruno Mountain area to the west, and wetland and aquatic habitats in San Francisco Bay to the east of the site. Currently, suitable wildlife habitat within the Baylands that could support wildlife movement is limited to Icehouse Hill, which could attract butterfly species present in the San Bruno Mountain area, and aquatic habitat in the lagoon which may attract fish species present in San Francisco Bay. In addition, Baylands development would enhance habitat for sensitive butterfly host and nectar plants and thus have a beneficial impact on potential butterfly movement between San Bruno Mountain and Icehouse Hill.

Baylands development, in combination with cumulative projects, would, however, adversely affect special-status avian species migrating through the cumulative analysis area as the result of an increased number of mid-rise and taller buildings along with increased nighttime lighting along the Pacific Flyway. Migrating birds such as songbirds can be affected by human-built structures because of their propensity to migrate at night, their low flight altitudes, and their tendency to be disoriented by artificial light, making them vulnerable to collision with obstructions. A majority of bird strikes occur when birds do not recognize windows on buildings. Thus, tall residential and non-residential buildings would pose collision hazards to migratory birds since effects associated with the lighting of the towers can alter the flight patterns of migratory birds and substantially increase bird strike collisions with the structures.

Cumulative Impact Conclusion

The substantial amount of high intensity development proposed within and adjacent to the Baylands would greatly increase the amount of building surface area subject to bird strikes. Because it cannot be assumed that all new development within the Bay Area portion of the Pacific Flyway would be designed and constructed with effective measures to avoid or minimize bird strikes, a significant cumulative impact would result.

Incremental Contribution of Baylands Development to the Significant Cumulative Impact

As demonstrated in Section 4.6, *Biological Resources*, Baylands development would implement specific and effective measures to design Baylands buildings to avoid or minimize bird strikes. The 2025 Specific Plan project would not have a cumulatively considerable contribution to a significant cumulative impact related to bird strikes.

Impact BIO-4: Severely Trim or Remove Trees Protected by Brisbane Municipal Code Chapter 12.12, Private Tree Regulations

Development projects within the City of Brisbane would be required to comply with the City's tree ordinance, acquire necessary permits from the City, and adhere to the provisions of the ordinance and permit for tree replacement. Baylands development would not, therefore, contribute to a significant impact related to severely trimming or removing trees protected by Brisbane Municipal Code Chapter 12.12.

Impact BIO-5: Remove or Harm Butterfly Host or Nectar Plant Species or Inhibit Butterfly Movement Between Host and Nectar Plants within the Baylands and the San Bruno Mountain Habitat Conservation Area

Of the cumulative projects identified in **Table 7-1**, only the Guadalupe Quarry Project is biologically linked to San Bruno Mountain or its Habitat Conservation Plan area. The quarry property is identified as an unplanned parcel within the Habitat Conservation Plan area and, therefore, does not have Section 10(a) coverage under the Habitat Conservation Plan.

The presence of host plants for sensitive butterflies has been documented within the Quarry Project site, including Johnny-jump up (*Viola pedunculata*), a host plant for Callippe Silverspot butterfly, and perennial lupine species (*Lupinus albifrons* ssp. *collinus* and *L. variicolor*), host plants for the Mission Blue butterfly. The EIR for the Guadalupe Quarry Project includes mitigation measures that minimize impacts to listed butterfly species by avoiding or reducing impacts to host plant species during construction and requiring design features to reduce the potential for impacts to butterflies during project operation.

Baylands development would (as mitigated) conserve and restore habitat for listed butterfly species and promote the recovery of these species through establishment of suitable habitat with host and nectar plants within dispersal range of these species from San Bruno Mountain Park.

Cumulative Impact Conclusion

Impact of Baylands Specific Plan development would not combine with impacts of the Guadalupe Quarry Project to generate a cumulative impact in relation to the San Bruno Mountain or its Habitat Conservation Plan.

7.3.5 CULTURAL RESOURCES AND TRIBAL CULTURAL RESOURCES

Cumulative impacts involving cultural or tribal cultural resources occur as the result of multiple projects affecting resources that have a common resource type or theme, such as a prehistoric ethnic site, an industry (e.g., railyard), or a historic theme (e.g., early settlement of a community) that occurs within a larger geographic context than a single project site.

a. Geographic Context and Method of Analysis

Cumulative effects involving cultural resources occur as the result of multiple projects affecting cultural resources with a common resource type or theme, such as historic ethnic sites or an industry (e.g., railroads), that occur within a larger geographic context than a single project site. Thus, the following analysis considers cumulative projects that are located immediately adjacent to the Baylands and elsewhere in Brisbane, as well as major regional projects, particularly those along and within the Bay.

The geographic context and method of analysis for cumulative land use and planning policy impacts are identified in **Table 7-10**. The full list of cumulative projects used in list-based analyses is provided in **Table 7-2**.

Table 7-10: Geographic Context and Methodology for Analysis of Cumulative Cultural Resources and Tribal Cultural Resources Impacts

	Geographic Context	List- or Projections-Based Analysis
Impact CUL-1 Historic Architectural Resources	Buildout of the Brisbane General Plan and cumulative projects within the City of Brisbane and the San Francisco portion of the San Francisco/San Mateo Bi-County Priority Development Area.	Land development and infrastructure projects having common potential effects on the Roundhouse, 7 Mile House Sports Bar and Grill, the former Schlage Lock Building A (Old Office Building), or the Bayshore/Crocker Tunnel, including: • Brisbane (**Table 7-1** projections for General Plan buildout and Cumulative Projects AA, BB, 1–4) • Infrastructure and Remediation Projects (Cumulative Projects A–I) • San Francisco portion of the San Francisco/San Mateo Bi-County Priority Development Area (Cumulative Projects 5–8)
Impact CUL-2 Archaeological Resources	Same as Historic Architectural Resources.	Land development and infrastructure projects, including: • Brisbane (**Table 7-1** projections for General Plan buildout and Cumulative Projects A, B, D–I, AA, BB, 1–4) • Infrastructure and Remediation Projects (Cumulative Projects A, B, D, E, I) • San Francisco portion of the San Francisco/San Mateo Bi-County Priority Development Area (Cumulative Projects 5–8)
Impact CUL-3 Tribal Cultural Resources	Same as Historic Architectural Resources.	Land development and infrastructure projects, including: • Brisbane (**Table 7-1** projections for General Plan buildout and Cumulative Projects A, B, D–I, AA, BB, 1–4) • Infrastructure and Remediation Projects (Cumulative Projects A, B, D, E, I) • San Francisco portion of the San Francisco/San Mateo Bi-County Priority Development Area (Cumulative Projects 5–8)
Impact CUL-4 Disturbance of Human Remains	Same as Historic Architectural Resources.	Land development and infrastructure projects, including: • Brisbane (**Table 7-1** projections for General Plan buildout and Cumulative Projects A, B, D–I, AA, BB, 1–4) • Infrastructure and Remediation Projects (Cumulative Projects A, B, D, E–I) • San Francisco portion of the San Francisco/San Mateo Bi-County Priority Development Area (Cumulative Projects 5–8) • Oyster Point (Cumulative Projects 12–18, 24–26, 29, 33)

b. Cumulative Impacts: Would the Baylands Specific Plan, in conjunction with past, present, and probable future projects, result in significant cumulative cultural or tribal cultural resources impacts?

Impact CUL-1: Historic Architectural Resources

In addition to the historic Roundhouse and Machinery & Equipment building within the Baylands, other historic resources in the surrounding area include the 7 Mile House Sports Bar and Grill, the former Schlage Lock Building A (Old Office Building), and the Bayshore/Crocker Tunnel. The significance of each of these resources is site-specific; only the Roundhouse and Machinery & Equipment building involve a common resource type or theme (SPRR rail yard),

and no thematic historical resources are recognized to exist among the cumulative projects identified in **Table 7-2**.

Past developments have involved demolition of industrial buildings at the Schlage Lock site immediately north of the Baylands for which significant and unavoidable impacts were identified, even with adaptive reuse of the Old Office Building (which has been completed), along with photo-documentation and public interpretation. However, these past impacts at the Schlage Lock site would not combine with impacts of the Baylands to form a significant cumulative impact to historic resources for the following reasons:

- There are no shared building types or historical themes between the historic industrial buildings at the Schlage Lock site and the former SPRR maintenance yard, including the remaining Roundhouse and Machinery and Equipment Building within the Baylands.
- There are substantial differences between the type and severity of impacts within the Baylands (potential incompatible adaptive reuse and potential incompatible new construction adjacent to historic resources within the Baylands) and Schlage Lock site (demolition of historic resources on the Schlage Lock site).

Cumulative Impact Conclusion

The lack of a common resource type or theme between the Baylands and cumulative projects, combined with the distances between historic resources and cumulative project sites, precludes the occurrence of cumulative impacts on historic architectural resources.

Impact CUL-2: Archaeological Resources

Archaeological resources are by nature specific to their local context. Baylands development, in combination with past, present, and probable future projects involving excavation, grading, or soil removal in previously undisturbed areas or at depths below those that have been previously disturbed, could encounter previously identified or unidentified archaeological resources.

Development projects within urbanized settings along the historic margins of San Francisco Bay typically occur within previously disturbed areas and are likely to encounter archaeological resources when excavations and construction activities involve disturbance at depths greater than those of previous development projects.

Cumulative Impact Conclusion

Because Baylands and cumulative projects would involve excavations along the historic margins of San Francisco Bay, a significant cumulative impact would result.

Incremental Contribution of the Baylands Specific Plan to the Significant Cumulative Impact

The 2025 Specific Plan project would not have a cumulatively considerable contribution a significant cumulative impact related to cultural resources since the potential for excavations to reach native soils is low. In addition, EIR mitigation measures have been developed to address the potential for encountering previously unknown resources.

Impact CUL-3: Tribal Cultural Resources

As documented in Section 4.7, *Cultural and Tribal Cultural Resources*, no Tribal cultural resources have been identified within the Baylands.

Cumulative Impact Conclusion

Because no Tribal cultural resources have been identified within the Baylands, the Specific Plan would not contribute to any cumulative Tribal cultural resource impact.

Impact CUL-4: Disturbing Known or Unknown Human Remains

Impacts associated with encountering and disturbing human remains are specific to their local context. Thus, it is unlikely that multiple projects would each involve excavations into native soils that would disturb a common set of human remains.

In addition, California law recognizes the need to protect Native American human burials, Native American skeletal remains, and items associated with Native American burials from vandalism and inadvertent destruction. The procedures for the treatment of Native American human remains are contained in California Health and Safety Code Section 7050.5 and PRC Section 5097 et seq.

Cumulative Impact Conclusion

In the unlikely event that Baylands development would, in combination with one or more cumulative projects, encounter a common set of previously unknown human remains, each such project would be required to comply with California Health and Safety Code Section 7050.5 and PRC Section 5097, thereby providing for avoiding or minimizing disturbance of human remains and appropriately treating any remains that are discovered. A less than significant cumulative impact would result.

7.3.6 TRANSPORTATION

a. Geographic Context and Methods of Analysis

The geographic context and methodology of analysis for cumulative transportation impacts are identified in **Table 7-11**. The full list of cumulative projects used in list-based analyses is provided in **Table 7-2**.

Table 7-11: Geographic Context and Methodology for Analysis of Cumulative Transportation Impacts

	Geographic Context	List- or Projections-Based Analysis
Impact TRA-1 Vehicle Miles Traveled	Nine-county San Francisco Bay Area region	Projections-based analysis of projected vehicle miles traveled.
Impact TRA-2 Use of Bicycle, Pedestrian, and Transit Modes of Transportation	Buildout of the Brisbane General Plan and cumulative projects within the City of Brisbane, the San Francisco portion of the San Francisco/San Mateo Bi-County Priority Development Area, and the Oyster Point portion of the City of South San Francisco	Land development and infrastructure projects, including: • Brisbane (**Table 7-1** projections for General Plan buildout AA, BB, 1–4) • Infrastructure and Remediation Projects (Cumulative Projects A–I) • San Francisco portion of the San Francisco/San Mateo Bi-County Priority Development Area (Cumulative Projects 5–8) • Oyster Point (Cumulative Projects 12–18, 24–26, 29, 33)
Impact TRA-3 Hazards to Vehicles, Bicyclists, or Pedestrians	Buildout of the Brisbane General Plan and cumulative projects within the City of Brisbane, the San Francisco portion of the San Francisco/San Mateo Bi-County Priority Development Area, and the Oyster Point portion of the City of South San Francisco	Land development and infrastructure projects, including: • Brisbane (**Table 7-1** projections for General Plan buildout and Cumulative Projects AA, BB, 1–4) • Infrastructure and Remediation Projects (Cumulative Projects A–I) • San Francisco portion of the San Francisco/San Mateo Bi-County Priority Development Area (Cumulative Projects 5–8) • Oyster Point (Cumulative Projects 12–18, 24–26, 29, 33)
Impact TRA-4 Emergency Response	City of Brisbane	Projections-based analysis of Brisbane General Plan buildout, along with projects affecting emergency access to/from Brisbane, including: • Brisbane (**Table 7-1** projections for General Plan buildout and Cumulative Projects AA, BB, 1–4) • Infrastructure and Remediation Projects (Cumulative Projects A–I) • San Francisco portion of the San Francisco/San Mateo Bi-County Priority Development Area (Cumulative Projects 5–8) • Oyster Point (Cumulative Projects 12–18, 24–26, 29, 33)

b. Cumulative Impacts: Would the Baylands Specific Plan, in conjunction with past, present, and probable future projects, result in significant cumulative transportation impacts?

Impact TRA-1: Vehicle Miles Traveled (VMT)

Through 2050, Plan Bay Area 2050 forecasts that the Bay Area will experience:

- Growth of 1.4 million jobs between 2015 and 2050, 25 percent of which will occur within San Francisco and San Mateo counties.
- An increase of over nearly 1.4 million households between 2015 and 2050, 25 percent of which will occur within San Francisco and San Mateo counties.

Regional traffic modeling undertaken for the Baylands EIR indicates that miles traveled within the nine-county San Francisco Bay area would increase from 155,006,000 in 2015 to 197,771,000 in 2040, assuming projected regional growth through 2040 in a cumulative no project scenario wherein development of the 2,200 dwelling units, 6.5 million s.f. of commercial use, and 500,000 s.f. of development that would have occurred within the Baylands is distributed throughout the Bay Area region (Fehr & Peers 2023).

Two separate VMT methodologies are used, including (1) an efficiency-based metric (i.e., VMT per capita), and (2) Total VMT Traveled. For both approaches, OPR's Technical Advisory (OPR 2018) allows reliance upon a comparison to baseline conditions for project level and cumulative analysis. As discussed under OPR's Technical Advisory, "A project that falls below an efficiency-based threshold that is aligned with long-term environmental goals and relevant plans would have no cumulative impact distinct from the project impact. Accordingly, a finding of a less-than-significant project impact would imply a less than significant cumulative impact, and vice versa." Consequently, while the analysis below provides future year cumulative scenarios, these are not required for the purposes of CEQA. Nevertheless, cumulative scenarios were run for the following scenarios:

1. Mid-Term Without Project represents projected background conditions that would exist in 2035.
2. Mid-Term Without Project Conditions were used to evaluate impacts of Phase 1 Baylands development taking into account land use, roadway, and traffic conditions surrounding the Baylands through 2035 when site preparation and construction of the western portion of the Baylands (Phase 1) is projected to be complete.
3. Mid-Term plus Phase 1 adds buildout of Phase 1 Baylands development (area west of the Caltrain right-of-way) to the projected year 2035 background conditions that were analyzed in the above Mid-Term Without Project scenario.

4. Mid-Term plus Phase 1 with Recommended Improvements represents mid-term conditions for the year 2035 consistent with local and regional growth, as well as buildout of the west side of the Specific Plan area (Phase 1), plus implementation of the year 2035 mid-term improvements recommended in TIA, including the Candlestick interchange improvements (Appendix F.1).
5. Cumulative without Project represents cumulative conditions for the year 2040 consistent with the Brisbane General Plan, regional growth associated with Plan Bay Area 2050, and C/CAG's current future year model horizon year of 2040. Existing conditions within the Baylands would continue through 2040 in this analysis scenario. Cumulative without Project conditions serve as the basis for analyzing full buildout of the Specific Plan.
6. Cumulative plus Project represents cumulative year conditions for the Year 2040 consistent with local and regional growth, including full buildout of the Baylands Specific Plan.
7. Cumulative plus Project and Candlestick Interchange represents cumulative year conditions for the Year 2040 consistent with the buildout of the Brisbane General Plan. As shown in Table 4.8-5, this scenario includes the Candlestick Interchange as envisioned within the Bi-County Transportation Study and the 2013 Project Study Report.
8. Cumulative plus Project with Candlestick Interchange and Recommended Improvements represents cumulative conditions for the year 2040 consistent with the buildout of the Brisbane General Plan and regional growth associated with Plan Bay Area, full buildout of the Specific Plan, improvement of the Candlestick Interchange, and implementation of improvements recommended in TIA (Appendix F.1).

Cumulative Impact Conclusion

The Plan Bay Area 2050 EIR identifies projected VMT for the San Francisco Bay Area in the year 2050 to be between 175,497,000 and 181,917,000, which theoretically includes development of the Baylands as adopted in Brisbane's General Plan Amendment GP-1-18. However, model runs prepared for the Baylands transportation analysis indicate VMT for the nine-county Bay Area region will be 197,771,000 in the Year 2040. A significant cumulative impact would therefore result from total regional development.

Incremental Contribution of the Baylands Specific Plan to the Significant Cumulative Impact

As indicated in **Table 7-12**, the Baylands Specific Plan would reduce regional VMT, with or without the Candlestick Interchange. The 2025 Baylands Specific Plan project would not have a cumulatively considerable contribution to a significant VMT impact.

Table 7-12: Effect of the Baylands Specific Plan on Regional Vehicle Miles Traveled

Cumulative Analysis Scenario	Nine-County Regional VMT (miles)	Change from Cumulative No Project (miles)
Year 2040 Cumulative VMT with Baylands development distributed around the nine-county Bay Area region	197,771,000	NA
Year 2040 Cumulative VMT with Baylands development but no Candlestick Interchange improvements	197,691,000	-80,000
Year 2040 Cumulative VMT with Baylands development and improvement of the Candlestick Interchange	197,666,000	-105,000

SOURCE: Fehr & Peers, 2025

Impact TRA-2: Use of Bicycle, Pedestrian, and Transit Modes of Transportation

To achieve regional GHG emissions reduction targets, Plan Bay Area 2050 forecasts a 300-percent projected increase in bicycle trips from baseline (2015) to future conditions (2050), resulting in bicycle trips growing from two percent of all trips in 2015 to seven percent of all trips by 2050. Each of the cities and counties within the cumulative impact analysis area maintain General Plan circulation elements intended to facilitate use of bicycle, pedestrian, and transit modes of travel. Development projects within these cities and counties would be required to be consistent with the applicable General Plan circulation element and to provide such facilities as necessary to achieve that consistency.

Cumulative Impact Conclusion

While the General Plan circulation elements for Brisbane, South San Francisco, Daly City, San Mateo County, and San Francisco each contain policies and programs to facilitate use of bicycle, pedestrian, and transit modes of travel, plans for bicycle and pedestrian facilities tend to focus on local facilities and connections to existing or already planned regional facilities. By comparison, local General Plan policies to facilitate the use of transit tend to focus on a more regional or subregional basis due to the regional focus of transit providers and transit planning agencies. None of the General Plan circulation elements in the cumulative analysis were developed with the express intent of achieving a 300-percent projected increase in bicycle trips from baseline (2015) to future conditions (2050) or to grow bicycle trips from two percent of all trips in 2015 to seven percent of all trips by 2050. Thus, cumulative development projects would exceed the capacity of planned bicycle and pedestrian systems, and a significant cumulative impact would result.

Incremental Contribution of the Baylands Specific Plan to the Significant Cumulative Impact

As noted in the significance conclusion for Impact TRA-2, the Specific Plan includes several inadequate bicycle and pedestrian connections. In addition, the proposed 4-lane roadway cross-section for the Geneva Avenue bridge would be inconsistent with planned bus rapid transit improvements and would hinder rather than facilitate transit use. Mitigation measures are

proposed including widening the Geneva Avenue bridge and requirements to provide adequate bicycle and pedestrian connections. The 2025 Specific Plan project would not have a cumulatively considerable contribution to a significant cumulative impact related to use of bicycle, pedestrian, and transit modes of transportation.

Impact TRA-3: Hazards to Vehicles, Bicyclists, or Pedestrians

The cities and counties within the cumulative impact analysis area each maintain design standards for roadways, as well as for pedestrian and bicycle facilities. Development projects within these cities and counties would be required to comply with such development standards.

Cumulative Impact Conclusion

Cumulative development would be required to comply with design standards maintained by cities, counties, and transportation agencies for roadways, as well as for pedestrian and bicycle facilities based on commonly accepted engineering safety standards such as those developed by Caltrans. Thus, a less than significant cumulative impact would result.

Impact TRA-4: Emergency Access

Although construction activities could temporarily impair roadways used for emergency response and evacuation, projects requiring encroachment permits for temporary construction activities within public roadways that could be used for emergency response or evacuation are required to implement traffic mitigation plans that address traffic control during the period when project construction is occurring within public right-of-way. To address any temporary road closures that would be required during construction, standard construction procedures include notification of emergency responders and development of alternative routes for emergency access.

Although design details of future cumulative projects cannot be known, Brisbane and adjacent cities maintain design standards for new and existing development and roadways to ensure passage of emergency vehicles. In addition, emergency access for cumulative projects would be subject to review by jurisdictions with authority over the projects as well as responsible emergency service agencies, thereby ensuring projects would be designed to meet applicable emergency access and design standards.

Cumulative Impact Conclusion

Although individual projects would be subject to standard design and construction requirements, cumulative development projects can be expected to occur simultaneously at multiple locations. Thus, police, fire, and emergency medical responders could experience multiple delays and inconveniences during any given emergency response trip. A less than significant cumulative impact would result.

Incremental Contribution of the Baylands Specific Plan to the Significant Cumulative Impact.

The Baylands Specific Plan and other cumulative projects would meet standard design and construction requirements, minimizing adverse effects on emergency response, and result in a significant cumulative impact only because of the potential for emergency responders to encounter lane closures and minor delays from multiple projects during a single emergency trip. The 2025 Specific Plan project would not have a cumulatively considerable contribution to a significant cumulative impact related to emergency access.

7.3.7 AIR QUALITY

a. Geographic Context and Method of Analysis

The geographic context and methodology of analysis for cumulative air quality impacts are identified in **Table 7-13**. The full list of cumulative projects used in list-based analyses is provided in **Table 7-2**.

Table 7-13: Geographic Context and Methodology for Analysis of Cumulative Air Quality Impacts

	Geographic Context	List- or Projections-Based Analysis
Impact AQ-1 Emissions of Criteria Pollutants	San Francisco Bay Area Air Basin	Projections-based analysis of criteria air pollutant emissions.
Impact AQ-2 Consistency with Applicable Air Quality Plan	San Francisco Bay Area Air Basin	Projections-based analysis of criteria air pollutant emissions.
Threshold AQ-3 Health Risk	Lands within 1,000 feet of the exterior boundaries of the Baylands Specific Plan	Land development and infrastructure projects, including the Baylands Specific Plan and: • Brisbane (Cumulative Projects AA, BB) [a] • Infrastructure and Remediation Projects (Cumulative Projects A, B, C, E, F, G, I, M, N) • San Francisco portion of the San Francisco/San Mateo Bi-County Priority Development Area (Cumulative Project 6)
Impact AQ-4 Odors	Lands within 1,000 feet of the exterior boundaries of the Baylands Specific Plan	Land development and infrastructure projects, including the Baylands Specific Plan and: • Brisbane (Cumulative Project AA) • Infrastructure and Remediation Projects (Cumulative Projects A, B, C, E, I, N) • San Francisco portion of the San Francisco/San Mateo Bi-County Priority Development Area (Cumulative Project 6)

NOTE:

a. Although Cumulative Projects 1, 2, and 4 within the Sierra Point area are within 1,000 feet of the lagoon portion of the Specific Plan, they are not within 1,000 feet of any Baylands housing, commercial/office development, or existing sensitive receptors and are therefore not analyzed as cumulative projects in relation to health risks.

b. Cumulative Impacts: Would the proposed Baylands Specific Plan, in conjunction with past, present, and probable future projects, result in significant cumulative air quality impacts?

Impact AQ-1: Emissions of Criteria Pollutants for which the Air Basin is in Non-Attainment

Construction Emissions

Construction activity for cumulative development within the air basin, although temporary in nature at individual sites, would be expected to occur throughout the Specific Plan's construction period. Cumulative construction emissions are dependent on the extent of construction activities being undertaken for the 2025 Specific Plan project in combination with past, present, and reasonably foreseeable probable future projects under construction concurrently within any given year.

As individual projects are developed, construction activity would result in emissions of criteria air pollutants (e.g., $PM_{2.5}$ and PM_{10}) and precursors (e.g., reactive organic gases [ROGs] and NO_X) from site preparation (e.g., excavation, grading, and clearing); exhaust from off-road equipment, material delivery vehicles, and worker commute vehicles; vehicle travel on paved and unpaved roads; and other miscellaneous activities (e.g., building construction, asphalt paving, application of architectural coatings, and trenching for utility installation). Typically, the site preparation phase typically generates the greatest emission levels from activities associated with grading, compacting, and excavation.

The USEPA and CARB have adopted rules and regulations establishing criteria pollutant and hazardous emissions limits for diesel-powered on-road vehicles and off-road equipment. Implementation of USEPA and CARB rules and emission standards is therefore reasonably foreseeable. In addition, CARB's clean fuel standards would reduce emissions from all internal combustion engines and their stationary and portable equipment regulations would reduce emissions from the smaller equipment used at construction sites, such as portable generators and tub grinders.

Although the USEPA and CARB have adopted stringent air diesel PM emission regulations for construction equipment, these regulations alone do not ensure that each cumulative project would use only the lowest emissions-generating construction equipment due primarily to the fleet averaging component of the compliance requirements. It can be anticipated that construction impacts from some of the larger individual cumulative land development and infrastructure projects may individually exceed the thresholds for short-term construction criteria air pollutant emissions, particularly if best management practices (BMPs) are not implemented.

Operational Emissions

The Plan Bay Area 2050 EIR projects that area-source emissions of criteria pollutants and precursors would increase from 2015 through 2050. Area-source ROG emissions would increase by 22.8 tons per day, NO_X emissions by 5.3 tons per day, PM_{10} emissions by 1.5 tons per day, and $PM_{2.5}$ emissions by 1.5 tons per day due to increased population, households, and employment in the region. In addition, because the Bay Area is in nonattainment for state and federal ozone standards, the federal 24-hour $PM_{2.5}$ standard and state PM_{10} standard, and emissions of ozone precursors (ROG and summertime NO_X), $PM_{2.5}$ and PM_{10}, the Plan Bay Area 2050 EIR evaluated projected increased pollutant emissions to determine whether a cumulatively considerable net increase would result.

Although VMT in the Bay Area region will increase through 2050, the Plan Bay Area 2050 EIR concluded that mobile source emissions of criteria pollutants ROG, NO_X (summertime and wintertime), and $PM_{2.5}$ in the region would decrease between 2015 and 2050. When compared to existing conditions (2015), emissions associated with regional development consistent with Plan Bay Area 2050 projections would be reduced: ROG emissions by 70 percent (41.1 tons per day), summertime NO_X emissions by 81 percent (89.9 tons per day), and wintertime NO_X emissions by 81 percent (102.2 tons per day). The primary reason for these reductions is the increasingly stringent emission controls adopted by CARB for new vehicle engines and fuels, enhanced smog check programs, and fleet turnover wherein older polluting cars are retired and replaced with newer and substantially less polluting cars. In addition, the Bay Area's higher density transit-oriented development future land use pattern combined with transit investment and investment would reduce per capita driving and motor vehicle emissions.

Table 7-14 shows the 2015-2050 daily emissions change that is projected within the region.

Table 7-14: Net Projected Change in Regional Mobile and Area Source Emissions (Tons per Year)

Source	ROG	NO_X	PM_{10}	$PM_{2.5}$
Mobile	-41.1	-89.9	-0.7	3.0
Area	22.8	5.3	1.5	1.5
TOTAL	**-18.3**	**-84.6**	**0.8**	**4.5**
Increase from Existing?	**No**	**No**	**Yes**	**Yes**

SOURCE: Plan Bay Area 2050 EIR

Cumulative Impact Conclusion

As shown in **Table 7-14**, a net decrease in ROG and NO_X emissions is projected along with an increase in PM_{10} and $PM_{2.5}$ emissions within the Bay Area Air Basin. Increased PM_{10} and $PM_{2.5}$ emissions would contribute to the existing nonattainment condition for state and federal PM standards, thereby increasing the potential for adverse health impacts from exposure to PM.

Recognizing this regional air quality impact, the Plan Bay Area 2050 EIR proposed Mitigation Measures AQ-3(a) through AQ-3(d). Mitigation Measures AQ-3(a) through AQ-3(d) would reduce significant impacts from forecasted increases in $PM_{2.5}$ and PM_{10} because they would lead to reductions in vehicle trips and VMT. Further, Plan Bay Area 2050 EIR Mitigation Measure AQ-3(e) would reduce area-source emissions from natural gas combustion and landscaping equipment in new developments. Projects taking advantage of CEQA streamlining provisions of SB 375 (PRC Sections 21155.1, 21155.2, and 21159.28) would be required to apply these mitigation measures to address site-specific conditions. However, because reductions cannot be estimated, the Plan Bay Area 2050 EIR determined that it could not be concluded with certainty all significant impacts would be avoided. Thus, a significant and unavoidable cumulative impact would result.

Incremental Contribution of Baylands Development to the Significant Cumulative Impact

With implementation of Mitigation Measures MM AQ-2b through M-AQ-2d, construction NO_X emissions would be reduced, but not below the significance thresholds, as shown in **Table 4.9-12** and **Table 4.9-13**. Fugitive PM_{10} from construction would be reduced to less than significant through Mitigation Measure MM AQ-2a, which requires implementation of best management practices to minimize dust and would ensure impacts would not exceed the threshold fugitive PM_{10} and $PM_{2.5}$ from construction. Mitigation Measures MM AQ-2e through MM AQ-2j would reduce operational emissions for Phase 1 development and full Specific Plan buildout; however, emissions of all criteria pollutants would still exceed significance thresholds after mitigation.

Due to these significant unavoidable impacts, Baylands development would have a cumulatively considerable contribution to significant cumulative impact related to emissions of criteria pollutants.

Impact AQ-2: Consistency with the San Francisco Bay Area Clean Air Plan

Development projects within Brisbane would be subject to the provisions of the Brisbane General Plan, while cumulative development projects within San Francisco, South San Francisco, and Daly City would be subject to the provisions of those communities' General Plans. Even though each cumulative development project would be consistent with the local General Plan, General Plan consistency would not necessarily equate to consistency with the San Francisco Bay Area Clean Air Plan.

Transportation and infrastructure projects would be subject to the requirements of the agency undertaking such projects and would be required to be consistent with the San Francisco Bay Area Clean Air Plan and Plan Bay Area 2050 if state or federal funding was proposed. However, because state or federal funding might not be sought for all such projects, it is possible that some transportation or infrastructure projects would not be consistent with the San Francisco Bay Area Clean Air Plan.

Cumulative Impact Conclusion

To fulfill state ozone planning requirements, BAAQMD's 2017 Clean Air Plan, Spare the Air Cool the Climate (2017 Plan), includes all feasible measures to reduce emissions of ozone precursors—ROG and NO_X—and reduce transport of ozone and its precursors to neighboring air basins. In addition, the 2017 Plan builds upon and enhances BAAQMD's efforts to reduce emissions of $PM_{2.5}$ and TACs. The Plan Bay Area 2050 EIR concluded that the Plan Bay Area 2050's core objectives and strategies align with and would support the implementation of the 2017 Clean Air Plan. Thus, cumulative development consistent with Plan Bay Area 2050 growth projections projects "would not conflict with or obstruct implementation of the primary goals, applicable control measures, or implementation of any control measures of BAAQMD's 2017 Clean Air Plan" (MTC/ABAG, 2021), and a less than significant cumulative impact would result.

Impact AQ-3: Health Risk

Based on guidance from the BAAQMD, a significant cumulative health risk impact would occur if a project plus background and future cumulative stationary and mobile sources within a "zone of influence" of 1,000 feet consistent with the BAAQMD Modeling Guidance (BAAQMD 2022a) would combine with a project's health risks to expose sensitive receptors to substantial levels of toxic air contaminants (TACs) resulting in:

- A cancer risk level greater than 100 in 1 million;
- A non-cancer risk (chronic or acute) HI greater than 10.0; or
- Annual average $PM_{2.5}$ concentration of greater than 0.8 $\mu g/m^3$.

Existing (Background) Sources of Toxic Air Contaminants

The combined health risks from all existing background TAC and $PM_{2.5}$ sources were evaluated at the Baylands on-site and off-site maximally exposed individual residences (MEIRs) and at the on-site school receptor. Sources evaluated included all BAAQMD-permitted stationary sources, roadways with more than 44,000 vehicles per day,[390] the Caltrain rail line, and any other major source of emissions within 1,000 feet of the Specific Plan area. The cumulative health risk assessment tabulated the impact of Specific Plan-generated health risks plus off-site sources (stationary and mobile) near off-site and on-site MEIRs. As such, this evaluation identifies all sources within 1,000 feet of the project boundary.

[390] The BAAQMD recommends intersection-specific modeling of CO concentrations only for intersections where traffic volumes would exceed 44,000 vehicles per hour (24,000 vehicles per hour where vertical and/or horizontal mixing is limited), based on modeling of vehicle emissions demonstrating that below this volume of traffic CO concentrations would not exceed the applicable state air quality standards.

Cumulative Projects and Baylands Contribution to Cumulative Health Risk

The cumulative projects identified in **Table 7-13** were evaluated for their potential to contribute to cumulative health risks at a common maximally exposed individual resident (MEIR) within the Baylands. The TACs of concern from cumulative projects would include DPM from construction equipment and vehicles and from emergency backup generators, speciated TOGs from gasoline-fueled passenger vehicles, and entrained road dust ($PM_{2.5}$) from project-related travel on paved roads.

The **Caltrain Modernization Program** is nearing completion of electrification of Caltrain locomotives. These locomotives will be fully electric by the time the first phase of construction begins in the Baylands (PCJPB 2014). As a result, construction activities would not overlap with those of the Baylands. In addition, since Caltrain operations would be electrified prior to Baylands development, Modernization Program operations would not be a source of health risks.

The **California High Speed Rail** Final EIR/EIS determined that construction of high-speed rail facilities would contribute a maximum excess cancer risk of 1.1 per million and an annual average $PM_{2.5}$ concentration of less than 0.1 $\mu g/m^3$ along the subsection between San Francisco and South San Francisco. Because the state legislature has not provided funds for construction of high-speed rail between San Francisco and San Jose, the timing of construction in relation to Baylands construction cannot be known.

The Baylands Specific Plan would construct the **Geneva Avenue extension**, including the bridge over the Caltrain right-of-way, the impacts of which are included in Baylands' impacts.

While construction of **US 101 freeway interchange improvements** would generate TACs, construction of those impacts would not occur simultaneously with Baylands construction. Once constructed, the only operational TAC emissions associated with interchange improvements would be associated with the location of ramps that may be closer to existing or proposed receptors, thereby creating an increase in traffic emissions. However, such an increase in TACs from the US 101 interchange would be minor as would operational TACs from Baylands development and would be insufficient to combine to adversely affect a common MEIR. Thus, cumulative effects would be less than significant.

Baylands site remediation and **Title 27 Final Landfill Closure** cumulative projects would overlap in time with Baylands grading operations and are required to be completed prior to construction of buildings within Phase 1 and Phase 2 of the Specific Plan, respectively. Within the western portion of the Baylands, grading pursuant to a City of Brisbane grading permit would be the primary construction activity generating TACs. No information is available regarding quantified emissions of TACs for site remediation or resulting health risks. Because remediation activities are required by law to not increase health risks, it can be reasonably concluded that remediation actions undertaken subject to the regulatory authority of the Regional Water Quality Control Board and the Department of Toxic Substances Control would,

at most, add only minor TACs to those emitted by site grading. Within the eastern portion of the Baylands, construction of a landfill cap would overlap in time with grading pursuant to a City of Brisbane grading permit as soil materials within portions of the former landfill area are moved to the eastern portion of the Baylands. No information on the staging of landfill cap construction is available, making it impossible to quantify TAC emissions that might result from landfill cap construction that would overlap in time with Baylands site grading within the eastern portion of the Baylands. The environmental clearance for Title 27 Final Landfill Closure does not identify a significant cumulative TAC emissions impact and it is therefore reasonable to conclude that construction of the landfill cap would be coordinated with Baylands grading activities such that cumulative health risk impacts would be less than significant. Once operational, Baylands site remediation and final landfill closure would require infrequent trips for maintenance purposes and would not result in new sources of operational TACs.

The **Recology Modernization** project would have the potential to create construction and operational TAC emissions within its existing footprint. Such activities may include renovation of the construction and demolition debris sorting line, installation of new mechanical separation equipment, and construction of a fleet maintenance yard. Activities associated with these changes could increase TAC emissions levels. The nearest receptors to the Recology site are located in the Little Hollywood neighborhood of San Francisco, which is directly north of the Recology facility. Other future receptors include housing within the Bayshore District of the Baylands and within the Baylands North development in San Francisco. Activities associated with the Recology Modernization project could expose future proposed project receptors to an increase in risk levels from diesel combustion equipment used by Recology and from any fugitive $PM_{2.5}$ that could be generated from movement over paved and unpaved surfaces. While a wide variety of improvements to modernize existing Recology facilities and increase diversion of wastes to varying degrees have been proposed in the past, the Recology Modernization project has long been dormant, and sufficient information is not available to estimate changes in TAC emissions from modernization of Recology facilities.

The **Egbert Substation and SFPUC PG&E Acquisition** projects, as well as the Baylands Specific Plan, each include improvements to the Martin Substation. New PG&E equipment for the Baylands is expected to be consistent with the overall scale and type as existing equipment already located at the Martin Substation, such as transformers and HVAC equipment. This is also true for the Egbert and SFPUC projects. The closest sensitive receptors to the Martin Substation are across Geneva Avenue, but they would not be exposed to increased TAC emissions since future activities would be similar to existing activities.

The **Brisbane Housing Element** identifies housing opportunity sites. Housing opportunity sites other than Phase 1 of the Baylands are located well beyond the 1,000-foot geographic scope for cumulative risk impacts.

The **Baylands North** project would be constructed immediately adjacent to the residential and commercial towers in the Specific Plan's Bayshore District, across the extended Sunnydale Avenue. Potential cumulative risk impacts would mainly be associated with construction DPM and $PM_{2.5}$ emissions, plus operational mobile source TOG and $PM_{2.5}$ emissions after buildout, plus DPM emissions from any emergency backup generators. Much of Baylands North construction could overlap with Baylands grading and construction. However, quantified TAC emissions from Baylands North are not available.

Because of the significant project-level impacts identified for Baylands development in Impact AQ-3, the following mitigation measures were identified and are required to reduce the project-level impacts to less than significant.:

- **MM AQ-2a: Construction Best Management Practices**
- **MM AQ-2b: Clean Off-Road Construction Equipment**
- **MM AQ-2d: Clean On-Road Construction Trucks**
- **MM AQ-2f: Best Available Emissions Controls for Stationary Emergency Generators**
- **MM AQ-2h: Operational Truck Emissions Reduction**
- **MM AQ-2i: Electric Vehicle Charging Infrastructure**
- **MM AQ-2j: Electric Landscaping Equipment**

Because implementation of these measures is required of Baylands development, cumulative health risk impacts were evaluated including mitigated Baylands construction and operations.

Cumulative Health Risk Analysis

Table 7-15 and **Table 7-16** identify the cumulative incremental increase in lifetime cancer risk, non-cancer chronic hazard index, acute hazard index, and maximum annual-average $PM_{2.5}$ concentrations, including unmitigated Baylands emissions. The sensitive receptor locations shown in these tables are the same ones included in **Table 4.9-14** and **Table 4.9-15** for project-level health risks.

Table 7-15 and **Table 7-16** indicate that cumulative cancer risk, chronic hazard index, acute hazard index, and annual-average $PM_{2.5}$ concentration would all be below the cumulative significance threshold at the MEIRs and Baylands Middle School.

Thus, a less than significant cumulative health risk impact would result.

Table 7-15: Cumulative Incremental Increase in Lifetime Cancer Risk, Chronic Hazard Index, and Annual-Average $PM_{2.5}$ Concentration for Construction and Operations throughout Baylands Development

Receptor Type/Emissions Source[a]	Incremental Increase in Lifetime Cancer Risk (in 1 million)[b]	Chronic Hazard Index[b]	Acute Hazard Index[b]	Annual-Average $PM_{2.5}$ Concentration ($\mu g/m^3$)[b]
Maximally Exposed Individual Residence – Off-Site Resident Child Receptor – west of Bayshore Blvd., north of MacDonald Ave.[c]				
Project	5.0	<0.01	—	0.15
Background, Permitted Stationary Sources	5.5	0.02	—	0.26
Background, Roadway	8.8	0.03	—	0.20
Background, Rail	66.9	0.02	—	0.08
BACKGROUND, TOTAL	**81.2**	**0.07**	**—**	**0.54**
Project + Background	86.3	0.07	—	0.69
Significance Threshold	**100**	**10.0**	**10.0**	**0.8**
Exceeds Threshold (Yes or No)?	No	No	No	No
Maximally Exposed Individual Residence – Baylands Resident Child Receptor – high-density residential area north of Geneva Avenue, west of the Caltrain right-of-way[c]				
Project	3.0	<0.01	—	0.04
Background, Permitted Stationary Sources	4.8	0.01	—	0.13
Background, Roadway	3.0	0.01	—	0.09
Background, Rail	22.9	0.01	—	0.09
BACKGROUND, TOTAL	**30.7**	**0.03**	**—**	**0.30**
Project + Background	33.7	0.04	—	0.34
Significance Threshold	**100**	**10.0**	**10.0**	**0.8**
Exceeds Threshold (Yes or No)?	No	No	No	No
School – Baylands Middle/High School Receptor – southeast corner of Bayshore Boulevard and Main Street[c]				
Project	1.4	<0.01	—	0.01
Background, Permitted Stationary Sources	0.9	<0.01	—	<0.01
Background, Roadway	2.7	0.01	—	0.08
Background, Rail	11.3	<0.01	—	0.02
BACKGROUND, TOTAL	**14.9**	**0.02**	**—**	**0.10**
Project + Background	16.2	0.02	—	0.11
Significance Threshold	**100**	**10.0**	**10.0**	**0.8**
Exceeds Threshold (Yes or No)?	No	No	No	No

SOURCE: Data compiled by Environmental Science Associates in 2023.

ABBREVIATIONS: $\mu g/m^3$ = micrograms per cubic meter; HI = Hazard Index; MEIR = Maximally Exposed Individual Receptor; $PM_{2.5}$ = particulate matter 2.5 microns or less in diameter; REL = Relative exposure limit

NOTES:

a. Worker receptors are not included in the cumulative health risk assessment because the Bay Area Air Quality Management District tools required for the analysis are specific to residential exposure.
b. **Bold values** = threshold exceedance.
c. There are no acute hazard impact MEIRs because the primary TAC produced from construction is DPM, which does not have an acute REL.

Table 7-16: Cumulative Incremental Increase in Lifetime Cancer Risk, Chronic Hazard Index, and Annual-Average $PM_{2.5}$ Concentration for Receptors at Baylands Buildout

Receptor Type/Emissions Source[a]	Incremental Increase in Lifetime Cancer Risk (in 1 million)[b]	Chronic Hazard Index[b]	Acute Hazard Index[b]	Annual-Average $PM_{2.5}$ Concentration ($\mu g/m^3$)[b]
Maximally Exposed Individual Residence – north side of Main Street, at the approximate mid-point between Bayshore Boulevard and the Caltrain right-of-way				
Project	7.3	<0.01	0.01	0.22
Background, Permitted Stationary Sources	34.3	0.05	0.04	0.02
Background, Roadway	4.2	0.02	0.03	0.16
Background, Rail	7.9	<0.01	<0.01	0.01
BACKGROUND, TOTAL	**46.5**	**0.08**	**0.08**	**0.19**
Project + Background	53.8	0.08	0.09	0.41
Significance Threshold	**100**	**10.0**	**10.0**	**0.8**
Exceeds Threshold (Yes or No)?	No	No	No	No
Maximally Exposed Individual Residence – Baylands Resident Child Receptor - north side of Main Street, at the approximate mid-point between Bayshore Boulevard and the Caltrain right-of-way				
Project	12.9	0.01	0.01	0.26
Background, Permitted Stationary Sources	3.5	0.01	0.06	0.17
Background, Roadway	3.0	0.01	0.02	0.11
Background, Rail	29.4	0.01	<0.01	0.07
BACKGROUND, TOTAL	**35.8**	**0.03**	**0.09**	**0.35**
Project + Background	48.8	0.04	0.10	0.62
Significance Threshold	**100**	**10.0**	**10.0**	**0.8**
Exceeds Threshold (Yes or No)?	No	No	No	No
School – Baylands Middle/High School Receptor – southeast corner of Bayshore Boulevard and Main Street				
Project	13.0	<0.01	<0.01	0.11
Background, Permitted Stationary Sources	1.0	<0.01	0.01	<0.01
Background, Roadway	2.4	0.02	0.02	0.12
Background, Rail	13.9	<0.01	<0.01	0.01
BACKGROUND, TOTAL	**17.3**	**0.02**	**0.03**	**0.13**
Project + Background	30.2	0.02	0.03	0.24
Significance Threshold	**100**	**10.0**	**10.0**	**0.8**
Exceeds Threshold (Yes or No)?	No	No	No	No

SOURCE: Data compiled by Environmental Science Associates in 2023.

ABBREVIATIONS: $\mu g/m^3$ = micrograms per cubic meter; HI = Hazard Index; MEIR = Maximally Exposed Individual Receptor; $PM_{2.5}$ = particulate matter 2.5 microns or less in diameter; REL = Relative exposure limit

NOTES:

a. Worker receptors are not included in the cumulative health risk assessment because the Bay Area Air Quality Management District tools required for the analysis are specific to residential exposure.
b. **Bold values** = threshold exceedance.

Impact AQ-4: Generate Odors Adversely Affecting a Substantial Number of People

Typical sources of odorous emissions include landfills, transfer stations, and composting facilities; petroleum refineries, asphalt batch plants, chemical (including fiberglass) manufacturing, and metal smelters; painting and coating operations; rendering plants; coffee roasters; and food processing facilities.

Of the cumulative projects cited in **Table 7-2**, only the Recology 501 Tunnel Avenue Facility Modernization Project (Cumulative Project I) has the potential to combine with the Baylands Specific Plan to generate a significant cumulative odor impact. Other cumulative projects listed above would not construct the type of facility associated with odors. The odors associated with these cumulative projects would be those from diesel-powered vehicles and equipment during construction and would cease once construction is complete.

While modernization of the existing Recology solid waste management facility would be required to provide odor control measures, the effectiveness of those measures to eliminate objectionable odors cannot be known in the absence of a specific design for the modernization project and specific odor control measures. As documented in Impact AQ-4, with odor control measures required by Mitigation Measure MM AQ-4, the Baylands water recycling facility would not emit odors detectable at or beyond the property line of the facility. Thus, the Baylands Specific Plan would not combine with the Recology 501 Tunnel Avenue Facility Modernization Project to generate a significant odor impact, and no cumulative impacts would occur.

The Specific Plan could result in objectionable odors from the water recycling facility. As described in Impact AQ-4, to control odors, wastewater processing tanks and structures would be enclosed and/or covered and provided with positive ventilation through an odor control system, which would likely include a two-stage process that involves a biological trickling filter followed by granular activated carbon. With these controls, the Specific Plan would not contribute to a cumulative impact in combination with the Recology facility.

7.3.8 GREENHOUSE GAS EMISSIONS

a. Geographic Context and Method of Analysis

Greenhouse gas (GHG) emissions impacts throughout the state are assessed in terms of a project's contribution to a cumulative effect since no single project can cause a discernible change to climate. Climate change impacts are the result of incremental contributions from natural processes, as well as past and present human activities. Therefore, the area in which a proposed project in combination with other past, present, or probable future projects could contribute to a significant cumulative climate change impact due to GHG emissions cannot be defined by a geographical boundary such as a combination of sites, a city, a county, a metropolitan region, or an air basin. Because GHG emissions do not recognize political

boundaries, past, present, and future development projects contribute to global GHG emissions. BAAQMD CEQA Guidelines state that global climate change represents a significant cumulative impact to which the GHG emissions of individual projects contribute to the significant adverse environmental impacts of global climate change. The Specific Plan's GHG emissions would contribute to cumulative climate change effects, as described in Section 4.10.

b. Cumulative Impacts: Would the Baylands Specific Plan, in conjunction with past, present, and probable future projects, result in significant cumulative greenhouse gas emissions impacts?

Impact GHG-1: Emissions of Greenhouse Gases

The Plan Bay Area 2050 EIR notes that the Intergovernmental Panel on Climate Change (IPCC) has reached consensus that human-caused emissions of GHGs in excess of natural ambient concentrations are responsible for intensifying the greenhouse effect and leading to a trend of unnatural warming of the earth's climate, known as global climate change. It is "extremely likely" that more than half of the observed increases in global average surface temperature from 1951 to 2010 were caused by the anthropogenic increase in GHG concentrations and other anthropogenic forces together.

IPCC predicts that the global mean surface temperature will increase by the end of the 21st century (2081–2100), relative to 1986–2005, could range from 0.5 to 8.7 degrees Fahrenheit and that global mean sea level rise will continue during the 21st century, very likely at a faster rate than observed from 1971 to 2010.

The Plan Bay Area 2050 EIR also notes that accelerating global climate change has the potential to cause adverse impacts in the Bay Area, including but not limited to the following:

- Water Supply: Changes in local rainfall, saltwater intrusion, seawater flooding the Sacramento–San Joaquin Delta (Delta), and a reduced Sierra Nevada snowpack can all threaten the Bay Area's water supply. The potential for larger storms may also threaten current water management systems and infrastructure.
- Infrastructure: Increased risks of flooding because of sea level rise, coastal erosion, more frequent and extreme storms, and stronger precipitation events may lead to damage, inoperability, or impairment of critical infrastructure, such as wastewater treatment plants, sewage, power plants, and transportation. This would affect not only daily commutes and activities but also emergency response. Increased wildfires also threaten much of the inland infrastructure and can have cascading effects with rainfall on areas that were recently burned. Increased temperatures may complicate this adaptation, as they are expected to increase roadway construction costs.

- Agriculture: Changes in temperatures, more extreme heat days, and the earlier onset of spring may lead to suboptimal growing conditions for grapes and other agricultural products that significantly contribute to the Bay Area economy and tourism.
- Ecosystems and Biodiversity: Increased temperatures and wind changes are expected to increase the size and severity of wildfires, damaging habitat resilience and connectivity. With sea level rise, the Bay Area's coastal wetlands are threatened and cannot naturally move inland because of existing developments, thus destroying this important ecosystem. This threatens the region's freshwater fish species and may allow nonnative species to thrive. Increased temperatures also result in increased fire risk.
- Energy Demand, Supply, and Transmission: Increasing wildfires attributable to climate change threaten the transmission and distribution of electricity. Coastal flooding may affect other energy infrastructure, including oil and gas refineries or terminals. These challenges may be exacerbated by more common temperature extremes, which could lead to increased demand. This could lead to rolling blackouts or other issues with the Bay Area's aging energy infrastructure.
- Public Health: Many Bay Area residences and businesses were not built with air conditioning to control temperatures on extreme heat days, which may lead to illness and mortality. Higher temperatures also lead to worsened air quality and potentially the spread of diseases and pests. Increased incidence and severity of wildfires may also contribute to worsening air quality. These changes will disproportionately burden vulnerable populations.
- Tribal and Indigenous Communities: Tribal relationships with the environment have been limited because of historic U.S. policy. For many tribes, modern land status and geographic allotments create challenges for them to adapt to a changing climate.

Cumulative Impact Conclusion

A significant cumulative impact related to greenhouse gas emissions would result from Baylands development in combination with past, present, and probable future projects. As explained in BAAQMD CEQA Guidelines:

> *Similar to regulated air pollutants, GHG emissions and global climate change also represent cumulative impacts. GHG emissions contribute, on a cumulative basis, to the significant adverse environmental impacts of global climate change. Climate change impacts may include an increase in extreme heat days, higher concentrations of air pollutants, sea level rise, impacts to water supply and water quality, public health impacts, impacts to ecosystems, impacts to agriculture, and other environmental impacts. No single project could generate enough GHG emissions to noticeably change the global average temperature. The combination of GHG emissions from past, present, and future projects contribute substantially to the phenomenon of global climate change and its associated environmental impacts.*

Incremental Contribution of the Baylands Specific Plan to the Significant Cumulative Impact

BAAQMD CEQA Guidelines indicate, if a project is determined to have a significant GHG emissions impact, the impact is cumulatively considerable. As discussed in Impact GHG-1, even with mitigation, Baylands development would generate a net increase in GHG emissions and therefore have a significant impact. Thus, the 2025 Specific Plan project Baylands development would have a cumulatively considerable contribution to a significant cumulative impact in relation to increased emissions of GHG.

Impact GHG-2: Regional Greenhouse Gas Emissions

The Plan Bay Area 2050 EIR estimated that annual regional GHG emissions in the nine-county Bay Area would increase by 589,400 $MTCO_2e$ from 2015 to 2050, and that San Mateo and San Francisco counties would account for 42.0 percent of that increase. In comparison, Alameda County would account for 55.5 percent of the regional increase. Thus, a significant cumulative impact would result.

Incremental Contribution of the Baylands Specific Plan to the Significant Cumulative Impact

The Specific Plan's location in relation to transit, its mix of land uses, and implementation of TDM programs result in substantially lower per capita VMT than the regional average for Specific Plan area employees and workers. The Baylands lower per capita VM T would reduce future cumulative 2040 daily regional VMT by 80,000 miles at buildout (105,000 miles with construction of Candlestick interchange improvements) when comparing cumulative future 2040 regional VMT with and without the Specific Plan development.[391] The 2025 Specific plan project would not have a cumulatively considerable contribution to a significant cumulative impact related to regional GHG emissions.

Impact GHG-3: Consistency with Applicable Greenhouse Gas Emissions Reductions Plans, Policies, and Regulations

GHG reduction plans are adopted by national, state, and local jurisdictions. Within California, local climate action plans and GHG reduction plans are adopted locally to achieve the goals set in CARB's Scoping Plan and are therefore designed to support the same state-mandated goals and targets for GHG reduction. It is the responsibility of a myriad of local jurisdictions and transportation agencies to determine the specific greenhouse emissions measures to be implemented and whether such projects would be consistent with applicable emissions reductions plans, policies, and regulations.

[391] The cumulative future 2040 without Specific Plan scenario assumes that the 2,200 dwelling units, 6.5 million square feet of commercial development, and 500,000 square feet of hotel use proposed for the Specific Plan would occur outside of the Baylands within San Francisco and San Mateo County.

As a result, there is no assurance that cumulative development would be consistent with applicable emissions reductions plans, policies, and regulations or that the regional and state-wide reductions needed to attain 2030 and 2050 targets would be achieved. Nor is there assurance that global GHG reductions needed to avoid the adverse effects of climate change can be achieved.

Cumulative Impact Conclusion

The potential adverse effects of greenhouse gas emissions are well documented. Because there can be no assurance that individual projects would be consistent with applicable emissions reduction plans, policies, and regulations to the extent that the adverse effects of greenhouse gas emissions can be avoided, a significant cumulative impact would result.

Incremental Contribution of the Baylands Specific Plan to Significant Cumulative Greenhouse Gas Emissions Impacts

As documented in Section 4.10, Baylands development would be consistent with applicable greenhouse gas emissions reduction plans, policies, and regulations. Thus, the Specific Plan's contribution to the significant cumulative greenhouse gas emission impact would be less than cumulatively considerable.

7.3.9 ENERGY RESOURCES

a. Geographic Context and Method of Analysis

The geographic context for analysis of cumulative energy resources impacts is the nine-county San Francisco Bay Area and relies on the household and employment projections approved by MTC and ABAG for use in the regional sustainable communities strategy (see **Table 7-17**). The full list of cumulative projects used in list-based analyses is provided in **Table 7-2**.

Table 7-17: Geographic Context and Methodology for Analysis of Cumulative Energy Impacts

	Geographic Context	List- or Projections-Based Analysis
Threshold EN-1 Energy Consumption	Nine-county San Francisco Bay Area region.	Projections-based analysis of regional energy use.
Threshold EN-2 Consistency with Plans for Energy Efficiency	Nine-county San Francisco Bay Area region.	Projections-based analysis of consistency with plans for energy efficiency.

The Specific Plan would begin contributing incremental impacts to cumulative environmental conditions starting upon initiation of development on the Specific Plan site and would continue to do so through the *Plan Bay Area* horizon year of 2050 and beyond for the lifetime of the Specific Plan.

b. Cumulative Impacts: Would the Baylands Specific Plan, in conjunction with past, present, and probable future projects, result in significant cumulative energy resources impacts?

Impact EN-1: Wasteful, Inefficient, or Unnecessary Consumption of Energy Resources

Existing and projected energy consumption of projected population and employment growth in the region, measured in gigawatt-hours of electricity, BTU of natural gas, gallons of gasoline, and gallons of diesel fuel, was estimated for the year 2050 and compared to the regional projections' 2015 baseline year (MTC/ABAG 2021, **Table 3.6-5** and **Table 3.6-8**). MTC and ABAG estimated that annual electrical consumption within the nine-county Bay Area region would increase by 7.809 million megawatt hours, or about 14 percent, between 2015 and 2050. They also estimated that annual natural gas consumption would increase by 12,432,000 million British thermal units, or about 4 percent, during the same period. Each of these increases is well below the estimated increase in population (35 percent) and employment (also 35 percent) during the 2015-2050 planning horizon (MTC/ABAG 2021, Table 2-16). This means that the use of energy per capita is expected to decline substantially over time, resulting in a more efficient energy system which supports a larger economy.

For electricity, overall supply during most conditions is adequate; therefore, there is no existing significant adverse condition that would be worsened or intensified to which Baylands development might contribute. However, as demand continues to increase in PG&E's service area, temporary shortfalls could occur in PG&E's system (and other portions of the state-wide grid) during temporary periods of high peak demand. Peak demands occur in the region during the summer's hot weather conditions when people run their air conditioners. In the future, electrification of buildings and increased use of electricity as a transportation fuel would add to PG&E's peak demand.

With an increasing number of hot-weather days and the move toward electrification of buildings, meeting demand during peak periods is a key planning consideration for the utility. PG&E is actively planning to offset growth in peak demands by encouraging and deploying energy efficiency and conservation measures within its service area. Through a combination of increases in efficiency and deployment of power management strategies, including power imports during peak periods, PG&E expects to maintain sufficient capacity to provide power to its service area, including development allowed under the proposed project, at least through 2035 (PG&E 2022). More importantly, with the addition of on-site PV generation to satisfy EV charging demand, the project would generate more renewable solar energy than the total energy consumed. The renewable solar energy would be stored in the on-site battery storage facility. Therefore, on an annualized basis, the contribution of the proposed project to a potential cumulative impact with respect to electrical supply and capacity would not be cumulatively considerable.

Projected gasoline and diesel fuel consumption in the region was estimated based on the analysis of VMT estimates developed by MTC, fleet-average CO_2 emission rates for the region, and the carbon content of both fuel types. Fleet-average CO_2 emission rates for the region for both 2015 and 2050 were developed using CARB's emission factor model, EMFAC2021. MTC and ABAG estimated that gasoline consumption in the nine-county Bay Area would decrease by 2.4 million gallons (36 percent) daily, diesel consumption would decrease by 100,000 gallons (8 percent) daily, and natural gas consumption for transportation uses would double, to 20,000 gallons daily, from 2015 to 2050 (PG&E 2022, Table 3.6-9). The combined change would represent an approximately 31 percent decrease in transportation fossil-fuel fuel energy from gasoline, diesel, and natural gas combined.[392] This decrease in fossil-fuel fuel energy consumption would be partially offset by increases in electricity consumption as vehicles transition to EVs, but this increase in electricity demand is accounted for in the MTC and ABAG projections (MTC/ABAG 2021, **Table 3.6-5** and **Table 3.6-8**).

Site-specific development projects throughout the Bay Area would be required to comply with the energy efficiency standards in the California Green Building Standards Code (CALGreen Code)/Title 24 requirements, and some of the developments would provide for additional reductions in energy consumption by use of Leadership in Energy and Environmental Design (LEED©)-type energy efficiency infrastructure. This would reduce energy consumption for new buildings compared to existing regional averages; as stated above, population and employment growth would exceed the increase in overall energy use, resulting in less per-capita energy consumption.

Because *Plan Bay Area 2050* would promote compact development in established communities with high-quality transportation access, transportation-related fossil fuel consumption associated with new development in the Bay Area is projected to decrease through 2050 due to a number of factors, including development patterns that provide for greater use of transit and higher density mixed use development that allows residents to work, shop, and live within a small area, reducing average trip lengths, as well as increased use of transit and electric vehicles being recharged with 100 percent renewable energy (MTC/ABAG 2021, Table 2-16).

In addition, recent modifications to the CEQA Guidelines pursuant to Senate Bill (SB) 743 have introduced vehicle miles traveled (VMT) as the operative CEQA transportation significance threshold, replacing level of service (LOS) and other traffic delay metrics. The intent of this threshold is to reduce VMT within the region to align with CARB's goals of reducing state-wide VMT to achieve California's GHG reduction targets codified in SB 32 and AB 1279, including increasing transit usage and decreasing per capita energy consumption for vehicular travel. Other existing regulations are likely to result in more efficient use of all types of energy, and reduction in reliance on non-renewable sources of energy over the next 20+ years. These include

[392] It is noted that electricity use would increase with the increase in electric vehicles. This change is accounted for above in the discussion of energy use associated with population and employment growth.

the federal Energy Independence and Security Act and the state Long Term Energy Efficiency Strategic Plan (described in Section 4.11, *Energy Resources*), which are designed to reduce reliance on non-renewable energy resources and reduce energy demand by providing federal tax credits for purchasing fuel-efficient appliances and equipment. For these reasons, cumulative impacts associated with energy use would be less than significant.

Cumulative Impact Conclusion

Because projected population and employment growth would result in more efficient land use patterns, increased use of transit, and more energy-efficient buildings than "business-as-usual" conditions, projected cumulative energy use of the Specific Plan, in combination with other cumulative projects, would not be considered to be wasteful or inefficient, or to reflect significant unnecessary consumption. Thus, a less than significant cumulative impact would result.

Impact EN-2: Conflict with or Obstruct a State or Local Plan for Renewable Energy or Energy Efficiency

Consistency of cumulative development with energy-related provisions of the local General Plan and Plan Bay Area 2050 is included in the evaluation of significant impacts due to a conflict with an applicable adopted planning document in Section 7.3.1, Impact LUP-2, above.

7.3.10 NOISE AND VIBRATION

a. Geographic Context and Method of Analysis

The geographic context and methodology of analysis for cumulative noise and vibration impacts are identified in **Table 7-18**. The full list of cumulative projects used in list-based analyses is provided in **Table 7-2**.

Table 7-18: Geographic Context and Methodology for Analysis of Cumulative Noise and Vibration Impacts

	Geographic Context	List- or Projections-Based Analysis
Impact NOI-1 Increase Ambient Noise Levels during Construction	Lands within 3,000 feet of the Baylands.[a]	Land development and infrastructure projects, including: • Brisbane (**Table 7-1** projections for General Plan buildout and Cumulative Projects AA, BB, 1, 2, and 4) • Infrastructure and Remediation Projects (Cumulative Projects A, B, D, E, F, G, I, M, and N) • San Francisco (Cumulative Projects 6, 7, and 10)

	Geographic Context	List- or Projections-Based Analysis
Impact NOI-2 **Increase Ambient Noise Levels from Traffic during Operations due to Traffic**	Lands adjacent to roadways in the vicinity of the Specific Plan area.	Projections-based analysis of noise increases that would be generated by traffic generated within the nine-county Bay Area along the following roadways: • Bayshore Boulevard from Blanken Avenue to the southerly Brisbane City limits • Geneva Avenue from Carter Street to US 101 freeway ramps • Tunnel Avenue from Old County Road/Tunnel Avenue to Beatty Road • Blanken Avenue from Executive Park Boulevard to Tunnel Avenue • Visitacion Avenue from Bayshore Boulevard to Mansell Street • Sunnydale Avenue from Bayshore Boulevard to Santos Street • Main Street from Bayshore Boulevard to Linda Vista Drive • Guadalupe Canyon Parkway west of North Hill Drive • Old County Road from Bayshore Boulevard to San Francisco Avenue • San Bruno Avenue from Bayshore Boulevard to Glen Park Way
Impact NOI-3 **Increase Ambient Noise Levels during Operations due to Stationary Noise Sources**	Lands within 1,000 feet of the Baylands.[b]	Land development and infrastructure projects, including: • Brisbane (**Table 7-1** projections for General Plan buildout and Cumulative Projects D–I, AA, BB, 1, 2, and 4) • Infrastructure and Remediation Projects (Cumulative Projects A, B, D–I) • San Francisco portion of the San Francisco/San Mateo Bi-County Priority Development Area (Cumulative Projects 5–8) • Oyster Point (Cumulative Projects 12–18, 24–26, 29, 33)
Impact NOI-4 **Expose People to Excessive Noise Levels**	Lands within and adjacent to the Baylands.	Land development and infrastructure projects, including: • Brisbane (**Table 7-1** projections for General Plan buildout and Cumulative Projects D–I, AA, BB, 1, 2, and 4) • Infrastructure and Remediation Projects (Cumulative Projects A, B, D–I) • San Francisco portion of the San Francisco/San Mateo Bi-County Priority Development Area (Cumulative Projects 5–8)
Impact NOI-5 **Project-Induced Vibration**	Lands within 300 feet of the Baylands.[c]	Land development and infrastructure projects, including: • Infrastructure and Remediation Projects (Cumulative Projects A, B, D–I) • San Francisco (Cumulative Projects 5–7)
Impact NOI-6 **Exacerbate Human Annoyance or Hazards to Buildings due to Vibration Levels**	Lands within and adjacent to the Baylands.	Land development and infrastructure projects, including: • Brisbane (**Table 7-1** projections for General Plan buildout and Cumulative Projects D–I, AA, BB, 1, 2, and 4) • Infrastructure and Remediation Projects (Cumulative Projects A, B, D–I) • San Francisco portion of the San Francisco/San Mateo Bi-County Priority Development Area (Cumulative Projects 5–8)

NOTES:

a. This screening threshold distance was developed based on equations for stationary-source noise attenuation (California Department of Transportation, *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, September 2013). The development analysis also used the combined noise levels generated by pile driving equipment. Using the attenuation equations, the maximum noise level of 101 dBA for a pile driver would diminish to 65 dBA at 3,000 feet. Hence, 3,000 feet is used as the geographic scope, since 65 dBA is a common daytime background noise exposure for an urban area and commensurate with monitored noise levels around the project site.

b. This screening threshold distance was also developed based on equations for stationary-source noise attenuation and an assumed operational stationary source at 80 dBA. Noise from such a source would diminish to below 55 dBA at 1,000 feet. Monitored nighttime average noise levels at the closest noise-sensitive receptors were above 55 dBA.

	Geographic Context	List- or Projections-Based Analysis

c. This screening threshold distance was developed based on equations for vibration attenuation (Federal Transit Administration [FTA], *Transit Noise and Vibration Impact Assessment Manual*, 2018) and reference vibration levels for pile drivers. Using the attenuation equations, the typical vibration level of 0.644 inches per second PPV for a pile driver would diminish to 0.016 inches per second PPV at 300 feet. Hence, 300 feet is used as the geographic scope, since 0.02 inches per second PPV is the applicable threshold for building damage to historic structures.

b. Cumulative Impacts: Would the Baylands Specific Plan, in conjunction with past, present, and probable future projects, result in significant cumulative noise and vibration impacts?

Cumulative construction noise impacts would occur if construction activities associated with the 2025 Specific Plan project and one or more cumulative projects in close physical proximity would overlap in time, whereas operation impacts would be assumed to routinely occur concurrently. Due to attenuation of sound over distance, only those cumulative projects immediately adjacent to the Baylands could combine to generate cumulative construction or stationary source noise impacts. Cumulative traffic noise impacts could be generated by traffic increases from cumulative projects throughout the Bay Area and are analyzed on roadways in the vicinity of the Baylands where the Specific Plan could generate measurable noise increases in combination with cumulative traffic.

Similarly, because vibration impacts dissipate quickly with distance, given the physical separation of cumulative projects from the Baylands and the low likelihood that vibration-generating activities (e.g., site grading) would occur simultaneously, cumulative vibration impacts would be less than significant.

Impact NOI-1: Substantial Temporary or Permanent Increase in Ambient Noise Levels from Construction

Cumulative construction noise impacts would occur when Baylands construction activities occur simultaneously with construction of one or more cumulative projects within 3,000 feet of the Baylands. In addition to Baylands construction noise impacts that would be significant and unavoidable, the High-Speed Rail EIR/EIS reported that construction of the Brisbane LMF could be exceed the 8-hour Leq criterion of 70 dBA as far as 354 feet from the building structure and as far away as 706 feet from pile-driving activity during the foundation work and 446 feet from non-pile-driving activity during foundation work. Given that the precise timing for construction of cumulative projects is generally unknown in relation to the various increments of Baylands construction, it is conservatively assumed that Baylands construction activities would occur simultaneously with cumulative projects.

Cumulative Impact Conclusion

Given that the Baylands construction noise impacts would be significant and unavoidable, simultaneous construction within the Baylands and the LMF or one or more other cumulative projects within 3,000 feet of the Baylands would further increase ambient noise levels and a significant cumulative impact would result.

Incremental Contribution of Baylands Development to the Significant Cumulative Impact

Since Baylands construction activities would generate a significant and unavoidable noise impact, Baylands construction activities would have a cumulatively considerable contribution to a significant cumulative impact related to construction noise.

Impact NOI-2: Cumulative Traffic Noise Impacts

Cumulative Year 2040 traffic data was analyzed to estimate cumulative roadway noise increases. The roadway segments analyzed and resulting noise increases from increased traffic on area roadways are shown in **Table 7-19** for 2040 cumulative plus Baylands Specific Plan buildout conditions during the weekday p.m. peak hour.[393] The cumulative noise level was then compared to the existing noise level to determine if a cumulative roadway noise impact would occur.

Cumulative Impact Conclusion

As shown in **Table 7-19**, significant cumulative traffic noise increases would exceed thresholds along six of the fifteen roadway segments that were analyzed, and a significant cumulative impact would result.

Incremental Contribution of Baylands Development to the Significant Cumulative Impact

The six roadway segments experiencing significant cumulative noise impacts were examined to determine if the Specific Plan's contribution would be cumulatively considerable. **Table 7-20** compares Year 2040 roadway cumulative traffic noise with and without Specific Plan buildout. As show in in that table, the 2025 Specific Plan project would have a cumulatively considerable along two roadway segments:

- Tunnel Avenue from Blanken Avenue to north of Beatty Road
- Guadalupe Canyon Parkway west of North Hill Drive

[393] The peak hour was used to represent the maximum period of traffic generation and associated noise generated by the project.

Table 7-19: Weekday Peak-Hour Traffic Noise Increases along Roadways in the Baylands Vicinity for Cumulative 2040 Plus Specific Plan Buildout

Roadway Segment	Existing	Applicable Increase Threshold (dB)	Cumulative 2040 plus Specific Plan Buildout	dBA Difference	Significant Increase?
Bayshore Boulevard from Blanken Road to Geneva Road	69.2	1.5	71.7	2.5	**Yes**
Bayshore Boulevard from Geneva Avenue to Old County Road/Tunnel Avenue	72.9	1.5	76.3	3.4	**Yes**
Bayshore Boulevard from Old County Road/Tunnel Avenue to Southern City Limits	73.9	1.5	76.3	2.4	**Yes**
Geneva Avenue from Carter Street to Bayshore Boulevard	68.1	1.5	71.0	**2.9**	**Yes**
Geneva Avenue Extension from Bayshore Boulevard to US 101 ramps	NA	NA	71.6	NA	No[a]
Tunnel Avenue from Old County Road/Tunnel Avenue to South of Lagoon Road	65.1	1.5	71.6	6.5	No[b]
Tunnel Avenue from Blanken Avenue to North of Beatty Road	64.7	3	70.7	6.0	**Yes**
Blanken Avenue from Executive Park Boulevard to Gillette Avenue	56.5	5	62.7	6.2	No[c]
Blanken Avenue from Bayshore Boulevard to Tunnel Avenue	60.2	3	61.5	1.3	No
Visitacion Avenue from Bayshore Boulevard to Mansell Street	56.6	5	57.7	1.1	No
Sunnydale Avenue from Bayshore Boulevard to Santos Street	58.4	5	60.8	2.4	No
Main Street from Bayshore Boulevard to Linda Vista Drive	55.8	5	56.8	1.0	No
Guadalupe Canyon Parkway west of North Hill Drive	68.7	1.5	73.4	4.7	**Yes**
Old County Road from Bayshore Boulevard to San Francisco Avenue	62.2	3	65.0	2.8	No
San Bruno Avenue from Bayshore Boulevard to Glen Park Way	56.2	5	57.9	1.7	No

SOURCES: Traffic data compiled by Fehr & Peers in 2023, and modeling performed by Environmental Science Associates in 2023.

ABBREVIATIONS: dB = decibels; dBA = A-weighted decibels; NA = not applicable as road does not currently exist.

NOTES:

a. This roadway does not currently exist nor are there any existing noise-sensitive land uses along it.
b. There are no existing noise-sensitive land uses along this roadway segment; thus, the impact would be less than significant.
c. This impact along this segment would be less than significant because, as explained below, existing noise from the adjacent US 101 would reduce the realized increase to less than 1.0 dBA.

Table 7-20: Weekday Peak-Hour Traffic Noise Contribution of the Baylands Specific Plan to Cumulative Traffic Impacts

Roadway Segment	Cumulative 2040 without Specific Plan Buildout	Cumulative 2040 plus Specific Plan Buildout	dBA Difference	Cumulatively Considerable Contribution Threshold (dB) [a]	Is the Specific Plan's Contribution Cumulatively Considerable?
Bayshore Boulevard from Blanken Road to Geneva Road	72.5	71.7	-0.8[a]	>1.0	No
Bayshore Boulevard from Geneva Avenue to Old County Road/Tunnel Avenue	75.7	76.3	0.6	>1.0	No
Bayshore Boulevard from Old County Road/Tunnel Avenue to Southern City Limits	75.8	76.3	0.5	>1.0	No
Geneva Avenue from Carter Street to Bayshore Boulevard	69.1	71.0	0.9	>1.0	No
Tunnel Avenue from Blanken Avenue to North of Beatty Road	69.4	70.7	1.3	>1.0	**Yes**
Guadalupe Canyon Parkway west of North Hill Drive	72.3	73.4	1.1	>1.0	**Yes**

SOURCES: Traffic data compiled by Fehr & Peers in 2023, and modeling performed by Environmental Science Associates in 2023.

ABBREVIATIONS: dB = decibels; dBA = A-weighted decibels

NOTES:

Under 2040 conditions, the Geneva Avenue extension draws some traffic away from Bayshore Boulevard north of Geneva Avenue as people continue straight on Geneva Avenue rather than turn left onto northbound Bayshore Boulevard to reach Candlestick-Hunters Point or US 101.

a. Except in carefully controlled laboratory experiments, a change of 1 dB cannot be perceived. Consequently, a cumulatively considerable contribution would reasonably be greater than 1.0 dBA.

Impact NOI-3: Cumulative Stationary Source Operational Noise Impacts

The Noise and Vibration Study for the Caltrain electrification project (Wilson Ihrig 2014) conservatively estimated a 1.1 to 3.4 dBA, Ldn cumulative increase in noise levels along Tunnel Avenue and in Brisbane, resulting in a moderate cumulative noise impact. The Noise and Vibration Study for the High-Speed Rail project (CHSRA 2019) estimated this project would more than double the total number of train operations per day and would produce noise that exceeds standards for high-speed ground transportation. Therefore, there would be a significant and unavoidable cumulative operational noise impact attributable to the High-Speed Rail project alone. Noise analysis undertaken in the High-Speed Rail EIR/EIS did not quantify noise from LMF operations in dBA or the effects of LMF operational noise on Baylands housing, reporting that the closest identified receptors to the LMF were approximately 1,900 feet away (residences on Cliff Swallow Court). The combination of Baylands development and LMF operations would place high density residential development immediately across the Caltrain right-of-way from the LMF.

The Baylands Specific Plan would also contribute additional stationary source noise and transportation noise, as discussed below. Cumulative traffic noise impacts considered region-wide development projects that were included in the cumulative transportation analysis.

The Recology Modernization Project would have the potential to construct or move noise-generating activities within its existing footprint, outside of the Baylands Phase 2 area, east of Tunnel Avenue. Activities associated with Recology Modernization may be operational 24 hours a day and combine with noise generated within the Baylands and the Baylands North project in San Francisco. The nearest common receptors for these three projects are located in the Little Hollywood neighborhood of San Francisco, which is directly behind the Recology facility and future receptors within the Baylands District of the Specific Plan and the future Baylands North development, both of which would be at least 300 feet from the Recology site, depending on the location of the Recology improvements.

The SFPUC PG&E Acquisition Project includes improvements to the Martin Substation, as does the Baylands Specific Plan. New PG&E equipment is reasonably expected to be consistent with the overall scale and type of equipment already located at the Martin Substation, such as transformers and HVAC equipment. Receptors across Geneva Avenue from the substation may experience an increase in operational noise from these combined improvements, especially during nighttime hours. The PG&E Martin Substation is located in the City of Brisbane, but the nearest sensitive receptors are residences in Daly City, across Geneva Avenue, approximately 200 feet north of the substation boundary. Each transformer could generate up to 55 dBA at 6 feet (NEMA 2019). When combined, two transformers would generate noise levels of 58 dBA. The Daly City General Plan (City of Daly City 2013) reports ambient noise levels along Geneva Avenue to be 65–70 dBA. Because the transformer noise levels would be unlikely to exceed the ambient noise levels in the vicinity of receptors, operational noise would not be expected to exceed the Brisbane Noise Ordinance standards.[394] The transformer noise levels at these receptors would also likely be below the 60 dBA noise level considered acceptable by the City of Daly City General Plan noise compatibility guidelines. Therefore, cumulative equipment noise at the Martin Substation would not exceed the local noise ordinance or result in a substantial, permanent increase in ambient noise levels at sensitive receptors.

The Baylands North project will be constructed immediately adjacent to the residential and commercial towers in the Baylands District of the Specific Plan, across the extended Sunnydale Avenue. While specifications are not available to quantify noise from mechanical equipment, Specific Plan Mitigation Measure NO-1a provides a performance standard, consistent with Brisbane Municipal Code Section 8.28.030, for the selection and shielding of HVAC equipment associated with the Baylands. Similarly, mechanical equipment noise for the Baylands North

[394] Pursuant to the Brisbane Noise Ordinance, mechanical noise shall not exceed the local ambient noise level to any receiver by more than 10 dBA for a cumulative period of more than 10 minutes per hour, more than 20 dBA for more than 3 minutes per hour, or a noise level more than 30 dBA. Available at https://library.municode.com/ca/brisbane/codes/code_of_ordinances?nodeId=TIT8HESA_CH8.28NOCO.

project would also be restricted by San Francisco Noise Ordinance Section 2909, which generally prohibits fixed mechanical equipment noise and music in excess of 5 dBA above the ambient noise level from residential sources.

Cumulative Impact Conclusion

The High-Speed Rail project would have a significant and unavoidable operational impact for which it, along with Recology modernization and Baylands development, have common noise receptors in the Little Hollywood neighborhood of San Francisco directly behind the Recology facility and future receptors within the Specific Plan area. In addition, the combination of Baylands and high-speed rail projects would place high density residential development immediately across from the LMF, which would operate on a 24-hour-per-day schedule. Thus, a significant cumulative impact would result.

Incremental Contribution of Baylands Development to the Significant Cumulative Impact

The 2025 Specific Plan project would exceed applicable thresholds on one roadway segment with Phase 1 development and on two additional roadway segments (three total) at buildout. The Specific Plan would also place high density residential development along the west side of the Caltrain right-of-way across from the high-speed rail LMF and would have a cumulatively considerable contribution to a significant cumulative impact related to operational noise.

Impact NOI-4: Exacerbate Land Use/Noise Incompatibilities by Placing People in Areas with Excessive Noise Levels Due to Railroad, Freeway, or Aircraft Operations

Railroad

As stated in the Final EIR/EIS for the High-Speed Rail Project, Caltrain electrification and the high-speed rail project would increase existing passenger rail operations from 92 diesel trains operating at 79 miles per hour to 248-258 electric trains operating at 110 miles per hour past the Baylands and Baylands North project in San Francisco by 2040. In addition, the existing 2–4 freight operations through the Baylands are projected to increase to 7-10 trains per day. In addition, 24/7 operations at the light maintenance facility within the eastern portion of the Baylands would also generate noise that would adversely affect Baylands residential development. While the Final High-Speed Rail EIR/EIS does not report future rail noise in terms of decibels, it does disclose that existing rail noise at 50 Joy Avenue, Brisbane, Final EIR/EIS Figure 5-5 indicates that in the year 2040, "severe" noise impacts[395] would extend as far as 550 feet from the rail line.

[395] As indicated in the *Plan Bay Area 2050* EIR, there are an estimated 17,898 documented sites of contamination in some stage of DTSC or SWRCB oversight in the nine-county San Francisco Bay Area.

Thus, the cumulative effect of the Baylands Specific Plan, Baylands North, Caltrain Electrification, and High-Speed Rail projects would be to exacerbate existing noise impacts as the result of:

- Caltrain and the High-Speed Rail projects increasing noise by more than doubling the number, increasing the speed of passenger rail operations along the Caltrain rail line, and adding LMF operations within the Baylands and adjacent to the Baylands North project in San Francisco; and.
- The Baylands and Baylands North projects placing noise-sensitive residential and hotel uses within 750 feet and immediately adjacent to the Caltrain rail line (see **Figure 7-2**).

Freeway

Because Baylands housing would not be located within 2,000 feet of the US 101 freeway, the Baylands Specific Plan and the Baylands North project in San Francisco would not combine to exacerbate noise impacts by exposing people to excessive noise levels from the freeway.

Aircraft Operations

The proposed SFO Tomorrow Airport Development Plan would be the only cumulative project that would involve operations at San Francisco International Airport, approximately 3.5 miles to the southeast of the Baylands. The Notice of Preparation for this project states that proposed landside improvements are not expected to induce passenger demand but would rather serve as a roadmap to modernize SFO, increase the efficiency of airport operations, enhance the passengers, and cargo while on the ground. Therefore, no increase in aircraft operations is envisioned or induced by this cumulative project at SFO. As stated in the Baylands project-level passenger experience and balance the capacity of the existing runway system with the capacity of terminal and landside facilities needed for the handling of aircraft, general aviation analysis, the Specific Plan site is located outside the 65 dB CNEL noise contour of airport operations. Consequently, there is no potential for Baylands development to combine with other cumulative projects to exacerbate noise impacts by exposing people to excessive noise levels generated by aircraft operations.

Cumulative Impact Conclusion

Baylands development in combination with the Baylands North Project in San Francisco, Caltrain Electrification, and High-Speed Rail operations between San Francisco and San Jose would exacerbate noise impacts by:

- Placing residential development within 446–706 feet of the LMF rail flyover where the Final EIR/EIS states that an 8-hour L_{eq} criterion of 70 dBA could be exceeded; and

Figure 7-2: Residential Lands within the Specific Plan Area Subject to Severe Noise Impacts from Rail Operations

- Placing noise-sensitive residential and hotel uses within 750 feet of the Caltrain rail line where they would be subject to severe noise impacts from railroad operations, including more than doubling the number and increasing the speed of passenger train operations along the Caltrain rail line along with nighttime train operation to, from, and within the LMF.

Incremental Contribution of Baylands Development to the Significant Cumulative Impact

As shown in **Figure 3-5**, the Specific Plan places high density residential uses immediately adjacent to the Caltrain right-of-way from the future Main Street to the north side of the Geneva Avenue extension, as well as a substantial area of low-density residential to the west of the high density area. Thus, Baylands development would have a cumulatively considerable contribution to a significant cumulative impact related to exacerbating noise impacts by placing people in areas with excessive noise levels.

Impact NOI-5: Substantial Temporary or Permanent Increase in Vibration

Construction

Cumulative construction vibration impacts would occur if construction activities associated with the Baylands and one or more cumulative projects within 3,000 feet of the Baylands would overlap in time. Various construction activities for the Specific Plan would be undertaken starting with grading, which is assumed to start in 2025, through completion of the final buildings within the eastern portion of the site, which is assumed to occur in 2040.

Baylands site grading would overlap in time with both site remediation within the western portion of the site and the early increments of Title 27 landfill closure with building construction within first the western and later the eastern portion of the Baylands overlapping later increments of landfill closure. Baylands site grading could also overlap with some grading, as well as much of the building construction within the Baylands North project is San Francisco.

Construction of Candlestick interchange improvements on the US 101 freeway would likely not occur until relatively late in the Baylands development process but could overlap with construction of the last increments of building construction within the western portion of the Baylands and building construction within the eastern portion of the site, including the potential for concurrent construction of interchange improvements, construction of the northerly extension of Sierra Point Parkway, and Baylands buildings adjacent to the interchange. Construction of the high-speed rail LMF and related pile driving activities could overlap with pile driving for construction of Baylands buildings and construction of the Geneva Avenue bridge. Although it has long been dormant, it is possible that construction activities for the Recology Modernization project might overlap with Phase 1 or Phase 2 Baylands development.

Vibration-generating Baylands and cumulative project construction activities that could occur simultaneously include:

- Impact pile driving for Baylands buildings and piers for the Geneva Avenue bridge crossing over the Caltrain right-of-way.
- Grading for the Geneva Avenue extension and bridge, as well as earth movement and landfill cap construction associated with Title 27 landfill closure.
- Renovation of the Recology construction and demolition debris sorting line, installation of new mechanical separation equipment, and construction of a fleet maintenance yard; construction of roadways and parking areas within the Baylands and Baylands North projects; and Candlestick interchange improvements, each of which could include use of a vibratory roller.

The Egbert Switching Station (Martin Substation Extension), SFPUC PG&E Acquisition project, and Baylands electrical system all include improvements to the Martin Substation. These construction activities may involve paving that could require the use of a vibratory roller. While it is likely that each of these projects could occur simultaneously with the construction activities cited above occurring on the east side of Bayshore Boulevard, distances between the Martin Substation and these other construction sites make it unlikely that vibration generation during construction on either side of Bayshore Boulevard would combine with construction vibration on the other side to generate a cumulative impact. It is possible, however, that the Baylands and one of the two cumulative projects might require a common improvement at the Martin Substation, in which case a single construction project would be undertaken. In the unlikely event that improvements were to be needed for two or all three of the Baylands and cumulative projects, the most probable scenario would be for PG&E to merge improvements into a single coordinated construction effort.

The analysis of vibration impacts is based on instantaneous PPV levels, and worst-case ground-borne vibration levels from construction are generally determined by whichever individual piece of equipment generates the highest vibration levels. Unlike the analysis for average noise levels, in which noise levels of multiple pieces of equipment are logarithmically summed to generate a maximum combined noise level, instantaneous PPV levels do not combine in this way. Vibration from construction of Baylands and cumulative projects, even if those projects are located in close proximity, would not combine to raise the maximum PPV because there would be sufficient distance as well as a substantial unlikelihood of vibration peaks from separate construction sites occurring simultaneously. For these reasons, vibration impacts from construction activities within and near the Baylands would be highly localized and would not be expected to combine to further increase vibration levels from those predicted for pile driving associated with the Baylands alone.

Operations

Caltrain electrification and High-Speed Rail operations would combine along the Caltrain rail line running through the Baylands. The Noise and Vibration Study for the Caltrain electrification project conservatively estimated a 2 VdB increase in vibration levels along Tunnel Avenue at a distance of 125 feet from the nearest track centerline. However, this estimate does not account for differences in vibrations between electric trainsets and locomotives, and thus likely overestimates impacts of electrification, which could actually result in reducing vibrations along the rail line due to Caltrain operations compared to existing conditions. The Noise and Vibration Study for the High-Speed Rail project estimated a ground-borne vibration impact within the City of Brisbane and identified these impacts as significant and unavoidable because High-Speed Rail operations would more than double the number of train pass-by events each day and exceed the annoyance criterion of 72 VdB.

Cumulative Impact Conclusion

Due to the variability of timing for vibration-generating construction activities and distances between the Baylands and cumulative project construction activities, the extent to which vibration generation between Baylands and cumulative projects might overlap cannot be precisely known. However, should vibration-generating construction activities occur simultaneously, a significant cumulative construction impact would result.

The Baylands Specific Plan would not, however, result in any operational vibration-generating sources that could combine with operation vibrations of cumulative projects to generate adverse effects on existing or future uses. Thus, a less than significant cumulative operational vibration impact would result.

Incremental Contribution of the Baylands Specific Plan to the Significant Cumulative Impact

Because the 2025 Specific Plan project includes pile driving activities, it would have a cumulatively considerable contribution to a significant cumulative impact related to vibration during construction.

Impact NOI-6: Exacerbate Human Annoyance or Hazards to Buildings Due to Vibration Levels

As noted above, the Noise and Vibration Study for the High-Speed Rail project estimated a ground-borne vibration impact from increased Caltrain and High-Speed Rail operations within the City of Brisbane and identified these impacts as significant and unavoidable because the number of train pass-by events each day would more than double and exceed the annoyance criterion of 72 VdB. In addition, as noted above, both the Specific Plan and the Baylands North project in San Francisco would place residential and hotel uses immediately adjacent to the Caltrain right-of-way where residents and hotel guests would be exposed to that significant

cumulative vibration impact. In addition, LMF construction within 55 feet would expose buildings to excessive vibration.

Cumulative Impact Conclusion

Should pile driving activities for construction of the high-speed rail LMF and Baylands buildings occur simultaneously, a significant cumulative impact would result. A significant cumulative impact would also result from the combination of (1) Caltrain and High-Speed Rail operations more than doubling rail operations along the Caltrain right-of-way, exceeding the number of train pass-by events each day would more than double and exceed the annoyance criterion of 72 VdB; and (2) the Specific Plan and the Baylands North project in San Francisco placing residential and hotel uses immediately adjacent to the Caltrain right-of-way where residents and hotel guests would be exposed to that significant cumulative vibration impact.

Incremental Contribution of the Baylands Specific Plan to the Significant Cumulative Impact

As shown in **Figure 3-5**, the Specific Plan places high density residential uses immediately adjacent to the Caltrain right-of-way from the future Main Street to the north side of the Geneva Avenue extension, as well as a substantial area of low density residential to the west of the high density area. Thus, the Baylands Specific Plan would have a cumulatively considerable contribution to the significant cumulative impact. High speed rail operations would further exacerbate noise impacts by increasing rail operations along the Caltrain line. The 2025 Specific Plan project would have a cumulatively considerable contribution to a significant cumulative impact related to vibration both during construction and ongoing operations.

7.3.11 HAZARDS AND HAZARDOUS MATERIALS

a. Geographic Context and Method of Analysis

Hazards and hazardous materials impacts are generally localized and site-specific, except for those resulting from transportation of hazardous materials, upset conditions, or contamination of groundwater. As a result, the cumulative context for this analysis varies, depending on the threshold being analyzed, as described in **Table 7-21**. The full list of cumulative projects used in list-based analyses is provided in **Table 7-2**.

Table 7-21: Geographic Context for Analysis of Cumulative Hazards and Hazardous Materials Impacts

	Geographic Context	List- or Projections-Based Analysis
Impact HAZ-1 **Routine Use, Handling, and Storage of Hazardous Materials**	Lands within and adjacent to the Baylands.	List-based analysis, including the following projects in addition to the Baylands Specific Plan: • Infrastructure and Remediation Projects (Cumulative Projects A–I) • San Francisco portion of the San Francisco/San Mateo Bi-County Priority Development Area (Cumulative Projects 6–8)
Routine Transportation and Disposal of Hazardous Materials	Lands along roadways and highways providing access to the Baylands, as well as the Caltrain right-of-way within and adjacent to the Baylands.	List-based analysis, including the following projects in addition to the Baylands Specific Plan: • Brisbane (Cumulative Projects 1, 2, 4) • Infrastructure and Remediation Projects (Cumulative Projects A–I) • San Francisco portion of the San Francisco/San Mateo Bi-County Priority Development Area (Cumulative Projects 5–7) • Oyster Point (Cumulative Projects 12–21, 24–26, 29, 33)
Accidental Release of Hazardous Materials into the Environment	Lands within and adjacent to the Baylands.	List-based analysis, including the following projects in addition to the Baylands Specific Plan: • Infrastructure and Remediation Projects (Cumulative Projects A–I) • San Francisco portion of the San Francisco/San Mateo Bi-County Priority Development Area (Cumulative Projects 6–8)
Impact HAZ-2 **Emit Hazardous Emissions or Handle Acutely Hazardous Materials, Substances, or Waste within ¼ Mile of an Existing or Proposed School**	Lands that are within ¼ mile of any existing or proposed school that is within ¼ mile of the Baylands.	List-based analysis, including the following projects in addition to the Baylands Specific Plan: • Infrastructure and Remediation Projects (Cumulative Projects A–I) • San Francisco portion of the San Francisco/San Mateo Bi-County Priority Development Area (Cumulative Projects 6–8)
Impact HAZ-3 **Projects Located on Sites Included on a List of Hazardous Materials Sites**	Lands within and adjacent to the Baylands.	List-based analysis, including the following projects in addition to the Baylands Specific Plan: • Infrastructure and Remediation Projects (Cumulative Projects A–I) • San Francisco portion of the San Francisco/San Mateo Bi-County Priority Development Area (Cumulative Projects 6–8)
Impact HAZ-4 **Consistency with the Adopted "Comprehensive Airport Land Use Compatibility Plan for the Environs of San Francisco International Airport"**	Lands within and adjacent to the Baylands.	List-based analysis, including the following projects in addition to the Baylands Specific Plan: • Infrastructure and Remediation Projects (Cumulative Projects A–I) • San Francisco portion of the San Francisco/San Mateo Bi-County Priority Development Area (Cumulative Projects 6–8)
Impact HAZ-5 **Emergency Response**	Lands along roadways and highways providing access to the Baylands.	List-based analysis, including the following projects in addition to the Baylands Specific Plan: • Brisbane (Cumulative Projects 1, 2, 4) • Infrastructure and Remediation Projects (Cumulative Projects A–I) • San Francisco portion of the San Francisco/San Mateo Bi-County Priority Development Area (Cumulative Projects 5–7) • Oyster Point (Cumulative Projects 12–21, 24–26, 29, 33)

b. Cumulative Impacts: Would the Baylands Specific Plan, in conjunction with past, present, and probable future projects, result in significant cumulative hazards and hazardous materials impacts?

Impact HAZ-1: Use, Handling, and Storage of Hazardous Materials

Routine Use, Handling, and Storage of Hazardous Materials

Several development projects within the vicinity of the Baylands (see **Table 7-21**) would involve the routine need for use, handling, and storage of hazardous materials, which, in combination with Baylands development, could result in a substantial cumulative increase in the use, handling, and storage of hazardous materials.

Baylands and cumulative development projects would use consumer products containing hazardous chemicals that are common in residential, medical, office, retail, commercial services, and warehouse settings. Small quantities of hazardous materials are also associated with residential land uses, including cleaning products, fuels, oils, pesticides, and lubricants. Because general office, commercial services, retail, and household hazardous materials are typically handled and transported in small quantities, and because the health effects associated with them are generally not as serious as for many industrial uses, adverse cumulative effects on the environment with respect to the routine transport, use, or disposal of general office and household hazardous materials would not result.

R&D and life sciences/biotech uses permitted within the Baylands by the Specific Plan, in combination with the R&D uses proposed for the Genesis Marina, Sierra Point Towers, Sierra Point Hotel and Life Sciences Project, Sierra Point towers, and the former Schlage Lock site, as well as the Brisbane LMF (Cumulative Projects 1, 2, 4, 6, and C, respectively), could include the storage, handling, transport, and disposal of relatively larger quantities of hazardous materials that would be subject to regulatory requirements that are designed to minimize the potential for adverse effects due to exposure. Laboratory-based activities are reasonably expected to include both "dry" laboratories (or operations), where relatively small or negligible quantities of hazardous materials would be used and the types of hazardous materials would be limited to such items as cleaning and maintenance materials and office products, as well as "wet" lab functions that could involve a broad spectrum of activities involving hazardous materials used in controlled indoor environments.

These R&D and life sciences/biotech uses would be subject to more intense regulation and oversight than typical commercial/office businesses. Employees performing wet laboratory work would be required (by law) to receive specific training in the use and handling of hazardous materials, which is intended to protect the workplace and also to minimize the potential for spills or inadvertent releases that could adversely affect the environment through air emissions or releases to sewers, storm drains, or land. Medical-related establishments would

involve use, transport, and storage of small amounts of laboratory-type chemicals, compressed gases, and pharmaceuticals, and radiological materials would be used and stored. Medical, biohazardous, and low-level radioactive wastes would also be produced from these activities. The LMF would be expected to maintain a relatively large inventory of cleaning solvents and oils, and other chemicals for trainset maintenance.

Cumulative Impact Conclusion

The health and safety procedures required for the routine use, handling, and storage of hazardous materials protect workers and other individuals in the immediate vicinity of those materials and also protect the adjacent community and environment. Because the use, handling, and storage of hazardous materials is highly regulated, a less than significant cumulative impact would result in relation to the routine use, handling, and storage of hazardous materials.

Routine Transportation and Disposal of Hazardous Materials

Because general commercial/retail, household, and medical hazardous materials used by the types of uses planned for the Baylands and cumulative projects are typically handled and transported in small quantities, and because the health effects associated with them are generally not as serious as large-scale industrial processing uses, adverse cumulative effects on the environment with respect to the routine transport, use, or disposal of general office and household hazardous materials would not result.

Hazardous materials would be routinely transported to, from, and within the Baylands and cumulative project sites, as well as along area roadways, including small amounts of hazardous waste transported to licensed disposal facilities. Because the specific types and amounts of hazardous materials transported to or from cumulative project sites are dependent on the specific businesses that would locate within the Baylands and cumulative project sites, specific types and amount of hazardous materials transport cannot be definitively known. It can be anticipated, however, that biotechnology facilities, as well as medical laboratories and medical-related uses, would be developed within the Baylands and cumulative project sites, serving as a source for hazardous medical wastes.

Baylands and cumulative developments would simultaneously use the same roadways in the vicinity of the Baylands (e.g., Bayshore Boulevard, Geneva Avenue, Tunnel Road, US Highway 101) for transportation of hazardous materials. Baylands development would, when combined with the cumulative projects enumerated above, result in a substantial cumulative increase in the amount of hazardous material transported in the area.

Cumulative Impact Conclusion

The transport and disposal of hazardous materials would be provided by vendors licensed for such transport, and appropriate documentation for all hazardous materials and wastes would

be required for compliance with existing hazardous materials regulations. Adherence to existing state and federal regulations related to hazardous materials transport and disposal at facilities specifically designed for hazardous materials disposal would thus minimize the possibility of hazardous materials releases due to the routine transport and disposal of hazardous materials. In addition, the potential for multiple projects to combine to generate a cumulative impact would be remote. Thus, although there would be a substantial cumulative increase in the amount of hazardous materials transported in the area as a result of cumulative development, a less than significant cumulative impact from transportation of those materials would result.

Accidental Release of Hazardous Materials into the Environment

There are several reasonably foreseeable situations that could result in the accidental release of hazardous materials into the environment, such as vehicular accidents during transport of hazardous materials and accidental spills occurring during otherwise routine use of hazardous substances in construction or operation of land uses. Other reasonably foreseeable accident risks that could expose the public and environment to potentially hazardous materials include disturbance of hazardous wastes in soil or groundwater, hazards associated with demolition of structures and grading, and construction in areas with naturally occurring asbestos. Cumulative effects would be more likely to occur as the results of increased risk due to increased transport and use of potentially hazardous materials from cumulative projects rather than from multiple accidents at multiple sites occurring simultaneously.

Transportation Accidents

Traffic accidents can occur during the transport of gasoline or other hazardous materials being transported along area roadways as well as their transport to, from, and within the Baylands and cumulative project sites. Typically, traffic accidents would result in small spills that would have a negligible impact on public health and the environment because they would be discrete, localized releases. Spills would be resolved in accordance with applicable regulations so that there would not be long-term exposure or potential for contaminant migration. Hazardous materials spills or releases, including petroleum products, such as gasoline, diesel, and hydraulic fluid, regardless of quantity spilled, must be immediately reported if the spill has entered or threatens to enter a water of the state, including a stream, lake, wetland, or storm drain.

Less likely, but still possible, would be the release of hazardous materials into the environment as the result of a freight train accident. Such accidents would have the potential for larger releases of materials that are more toxic than those that might occur in a traffic accident on area roadways. Baylands development would not, however, contribute to cumulative risk of accidental release of hazardous materials into the environment as the result of a train accident.

In addition, Baylands development in combination with past, present, and probable future projects would increase the number of people exposed to hazards associated with

transportation of hazardous materials and potential risks of upset both temporarily during construction as well as in the long term following construction and development activities.

As noted above, the transport of hazardous materials would be provided by vendors licensed for such transport. Appropriate documentation for all hazardous materials and wastes being transported would also be required to comply with existing hazardous materials regulations. Adherence to existing state and federal regulations related to hazardous materials in combination with roadway improvements provided by Baylands development and other past, present, and probable future cumulative projects in compliance with applicable roadway design standards would minimize the possibility of hazardous materials releases.

Construction Accidents

Demolition of existing structures and infrastructure within the Baylands and cumulative projects could result in exposure of construction workers and nearby residents and employees to airborne contaminants during demolition activities or improper handling and disposal of debris containing hazardous materials. However, federal, state, and local regulations are in place to minimize potential impacts through adherence to regulatory standards that prescribe specific methods of material characterization, handling, and disposal, including training of construction workers regarding actions to be taken in the event of an accidental release of hazardous materials.

Long-Term Operational Impacts

In the longer term, development of the Baylands in combination with past, present, and probable future projects would be generally associated with sustained, expanded use of household hazardous materials (e.g., paints, cleaning supplies, solvents, and petroleum products). Many specific land uses (e.g., dry cleaners, gas stations, and certain industrial uses) could also involve routine transport, use, and disposal of certain hazardous materials and wastes unique to the land use (e.g., medical waste). These activities are subject to a suite of established regulations that address the potential for impacts from the routine transport, use, and disposal use of hazardous materials.

Cumulative Impact Conclusion

Baylands development, combined with past, present, and reasonably foreseeable probable future development, would increase the potential for accidents and risk of upset releasing hazardous materials into the environment, although the potential for multiple projects to simultaneously experience accident conditions that release hazardous materials into the environment would be remote. Cities and counties typically expand emergency services capabilities over time commensurate with the increased demands generated by population and employment growth resulting from approvals of cumulative projects. Thus, a less than significant cumulative impact would result.

Impact HAZ-2: Emit Hazardous Emissions or Handle Acutely Hazardous Materials, Substances, or Waste within ¼ Mile of an Existing or Proposed School

A comprehensive set of federal, state, and local laws and requirements regulate the transportation, use, storage, and disposal of hazardous materials and wastes to reduce the potential risks of human and environmental exposure during post-construction operations of the land use types permitted within the Baylands. Baylands Specific Plan uses would not handle acutely hazardous materials, substances, or waste within ¼ mile of an existing or proposed school.

However, as shown in **Table 4.13-3**, proposed middle school locations do not meet all provisions of CCR Title 5, Section 14010. Mitigation Measure MM HAZ-2 requires the proposed middle school to meet the standards set for in CCR Title 5, Section 14010, or to prepare the required studies for review by the Department of Education and to secure approval of the proposed school site pursuant to the provisions of CCR Title 5, Section 14010(u).

Cumulative Impact Conclusion

Development of the proposed middle school within the Baylands would be required to meet the standards set for in CCR Title 5, Section 14010, or to prepare the required studies for review by the Department of Education and to secure approval of the proposed school site pursuant to the provisions of CCR Title 5, Section 14010(u).

Baylands development would not contribute to cumulative impacts related to emissions of such substances within ¼ mile of an existing or proposed school. The four provisions of CCR Title 5, Section 14010 that the proposed middle school locations do not meet—proximity to a PG&E 230 kV underground electrical transmission line along Bayshore Boulevard and a PG&E 24-inch high-pressure natural gas transmission pipeline, as well as proximity to the Caltrain railroad right-of-way and the sites being subject to liquefaction and cyclic densification during a design seismic event—occur regardless of any cumulative project. Thus, the 2025 Specific Plan would not combine with any cumulative project, and a less than significant cumulative impact would result.

Impact HAZ-3: Projects Located on Sites Included on a List of Hazardous Materials Sites

As identified in **Table 4.13-8**, two properties (former Southern Pacific railyard, former Brisbane Landfill) that are included on a list of hazardous materials sites pursuant to Government Code Section 65962.5 are located within and adjacent to the Baylands, while three others (PG&E Martin Substation, South Levinson parcel, Schlage Lock) are located in close proximity to the Baylands.[396] Baylands site grading operations could overlap in time with remediation of the former railyard and final closure of the former landfill.

[396] As indicated in the Plan Bay Area 2050 EIR, there are an estimated 17,898 documented sites of contamination in some stage of DTSC or SWRCB oversight in the nine-county San Francisco Bay Area.

Site grading for Specific Plan development as well as excavation of wastes within the former landfill area for the LMF could inadvertently disperse contaminated material into the environment and expose construction personnel to potentially hazardous conditions. For example, dewatering activities could accelerate the migration of contaminated groundwater or could discharge contaminated groundwater to surface waters. Potential hazards to human health include ignition of flammable liquids or vapors; inhalation of toxic vapors in confined spaces, such as trenches; and skin contact with contaminated soil or water. These risks would be greatest for construction workers; however, it is possible that the nearby public could be affected if the contaminated materials are of a sufficient volume.

Unless construction activities are coordinated with site remediation activities, there would be a temporary increased risk of damaging or interfering with remediation site controls, such as soil containment areas. Temporary effects could include potential localized spread of contamination; exposure of construction workers or the public to chemical compounds in soils, soil gases, and groundwater; exposure of workers, the public, and the environment to airborne chemical compounds migrating from the demolition or construction areas; potential accidents during remediation as a result of operational failure of treatment systems; and potential interference with ongoing remediation activities.

Cumulative Impact Conclusion

Site grading activities subject to a City grading permit have been addressed by state regulatory agencies as part of their site remediation and final landfill closure approvals. In addition, site grading activities subject to City of Brisbane permits will implement protocols to ensure that contaminated soils are not exposed or moved during site grading. Development of the LMF would be required to secure approval of a modified Title 27 final landfill closure plan that would establish safety protocols to minimize the potential for localized spread of contamination; exposure of construction workers or the public to chemical compounds in excavated waste from the former landfill, soils, soil gases, and groundwater; exposure of workers, the public, and the environment to airborne chemical compounds migrating from excavation and construction areas; and potential damage to landfill gas and leachate control systems as well as the landfill cap within portions of the former landfill outside of the LMF footprint.

Development on properties included on a list of hazardous materials sites pursuant to Government Code Section 65962.5 would be required to comply with applicable regulations that prevent risks associated with existing hazardous materials sites, such as CERCLA, PRGs, Cortese List, and CHHSLs. Development adjacent to such sites within Brisbane and San Francisco would be required to comply with federal, state, and local regulations and policies to ensure the safety of development or redevelopment activities, and a less than significant cumulative impact would result.

Impact HAZ-4: Create an Airport Safety Hazard or Expose People to Excessive Noise from Aircraft Operations

The Specific Plan area is not within SFO's 65 dB CNEL, an Airport Safety Compatibility Zone, FAA Notification Area, or Airport Imaginary Surface area, and the SFO Airport Land Use Compatibility Plan does not identify any land use restrictions due to the location of the Baylands in relation to SFO. Thus, Specific Plan development would not combine with cumulative projects to generate any significant cumulative impact in relation to SFO or other airport operations.

Impact HAZ-5: Impair Emergency Response

The City of Brisbane has an emergency response plan that was developed to ensure allocation and coordination of resources in the event of an emergency. The City and County of San Francisco also maintains an emergency response plan for the same purpose. Caltrans uses emergency contracts when services or goods are needed to immediately respond to "a sudden, unexpected occurrence that poses a clear and imminent danger requiring immediate action to prevent or mitigate the loss or impairment of life, health, property, or essential public services" as provided by Public Contract Code Section 1102.

Baylands development in combination with future development in Brisbane and adjacent areas in San Francisco would result in a cumulative increase in demand for emergency response capabilities along area roadways and highways, including the US 101 freeway, Bayshore Boulevard, Geneva Avenue, Lagoon Road, and Tunnel Avenue.

Cumulative Impact Conclusion

Because the combination of Baylands and cumulative development within the City of Brisbane would more than double Brisbane's population and commercial/industrial development inventory, current first response capabilities and hazardous materials emergency response capabilities would not be sufficient for buildout of the cumulative projects. Furthermore, while substantive hazardous materials accidents are rare based on the implementation of existing regulatory requirements, when such incidents occur, they typically require substantial response.

However, neither the Specific Plan nor cumulative projects within Brisbane would be expected to handle or store substantial amounts of hazardous materials. In addition, it is reasonable to expect that existing emergency service capabilities within Brisbane would be expanded commensurate with the emergency response needs of future Baylands and cumulative projects development. Additional hazardous materials response services would be available from NCFA stations outside of Brisbane and through mutual aid agreements with other jurisdictions, and private hazardous materials emergency response agencies. Thus, a less than significant cumulative impact would result.

7.3.12 HYDROLOGY AND WATER QUALITY

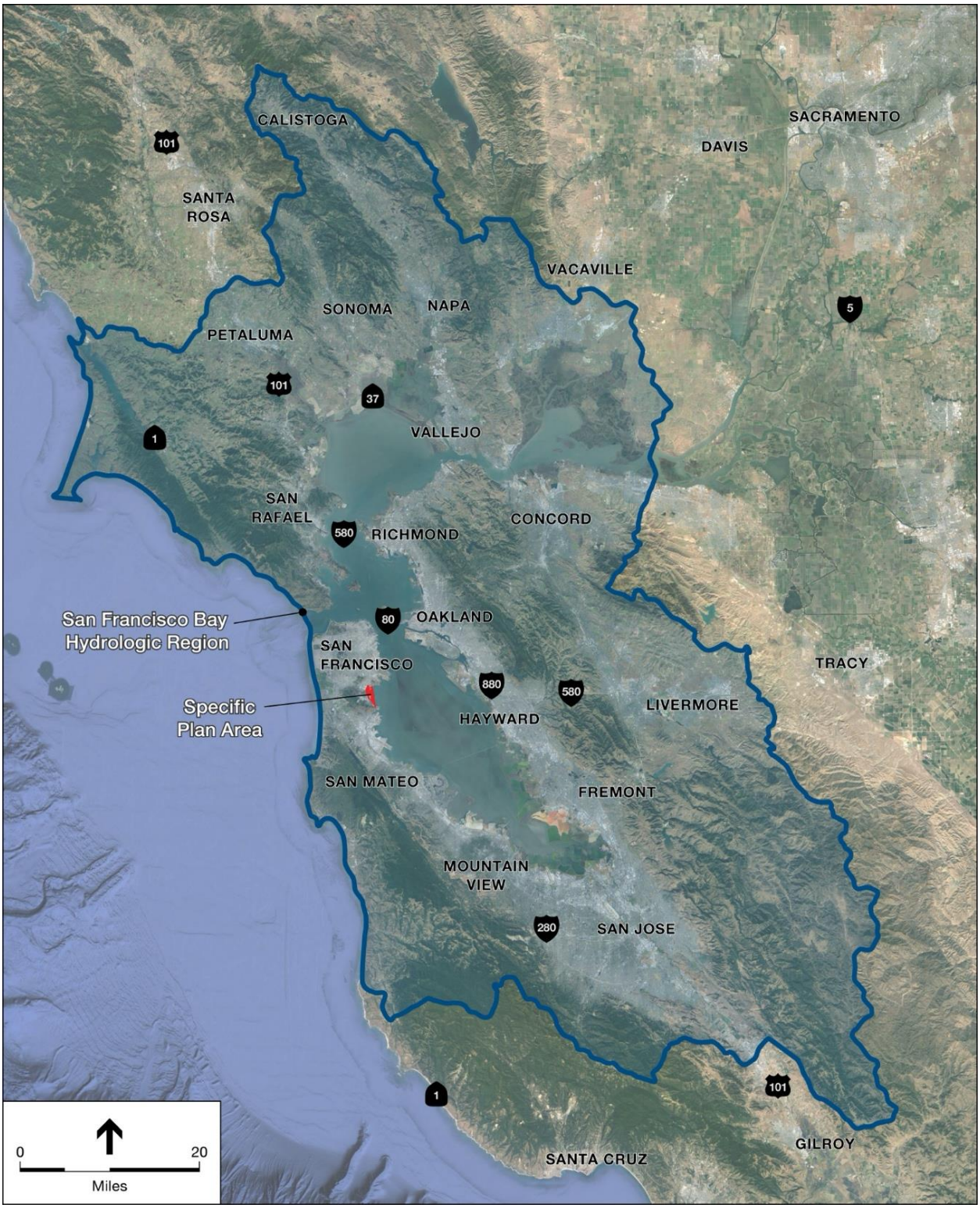
a. Geographic Context and Method of Analysis

The geographic context and methodology of analysis for cumulative hydrology and water quality impacts are identified in **Table 7-22**. The full list of cumulative projects used in list-based analyses is provided in **Table 7-2**.

Table 7-22: Geographic Context and Methodology for Analysis of Cumulative Hydrology and Water Quality Impacts

	Geographic Context	List- or Projections-Based Analysis
Impact HWQ-1 Surface and Groundwater Quality	Lands subject to the Water Quality Control Plan for the San Francisco Bay Region (Basin Plan) as illustrated in **Figure 7-3**.	Projections-based analysis of water quality within San Francisco Bay, Brisbane Lagoon, and drainage through the Baylands.
Impact HWQ-2 Groundwater Resources and Sustainable Groundwater Management	The groundwater basin underlying the Baylands, as well as groundwater basins underlying associated with California Water Company's potable water supply being acquired for the Baylands.	Projections-based analysis of groundwater resources available to California Water Service's existing South San Francisco and proposed Brisbane service areas.
Impact HWQ-3 Erosion and Siltation	Lands subject to the Water Quality Control Plan for the San Francisco Bay Region (Basin Plan).	Projections-based analysis of water quality within San Francisco Bay, Brisbane Lagoon, and drainage through the Baylands.
Impact HWQ-4 Flood Hazards	Lands within the Baylands as well as lands: • Within upstream watersheds draining into the Baylands; • Draining into Brisbane Lagoon; and • Downstream of the Baylands draining into San Francisco Bay.	List-based analysis, including the following projects in addition to the Baylands Specific Plan: • Brisbane (**Table 7-1** projections for General Plan buildout and Cumulative Projects AA, BB, 1–4) • Infrastructure and Remediation Projects (Cumulative Projects A–I) • San Francisco portion of the San Francisco/San Mateo Bi-County Priority Development Area (Cumulative Projects 5–7)
Impact HWQ-5 Release of On-Site Pollutants into the Environment as the Result of Flood Hazard, Emergent Groundwater, Tsunami, or Seiche	Lands subject to the Water Quality Control Plan for the San Francisco Bay Region (Basin Plan).	Projections-based analysis of water quality within San Francisco Bay, Brisbane Lagoon, and drainage through the Baylands.

Figure 7-3: San Francisco Bay Hydrologic Region (Area Subject to the Basin Plan)



b. Cumulative Impacts: Would the Baylands Specific Plan, in conjunction with past, present, and probable future projects, result in significant cumulative hydrology and water quality impacts?

Impact HWQ-1: Water Quality Protection

Construction Impacts

Projected growth of new residential units and employment centers within the San Francisco Bay Area Hydrologic Region would require substantial construction and ground disturbance that could result in erosion and sedimentation with the potential to adversely affect water quality. Following construction, common urban pollutants associated with sustained, expanded use of household hazardous materials, herbicides and pesticides, and erosion from soil disturbance could be transported in runoff and potentially adversely affect the quality of receiving surface waters or groundwater.

The Section 402 National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Phase I and Phase II permits required under the Clean Water Act, which cover all jurisdictions, as well as large institutional users within the San Francisco Bay Area Hydrologic Region, require agencies and developments to implement Stormwater Management Plans (SWMPs), which in turn require the implementation of source and treatment control measures. Section 402 NPDES Construction General permits require project proponents to incorporate general site design control measures into project design. These control measures may include conserving natural areas, protecting slopes and channels, and minimizing impervious areas. Treatment control measures may include use of vegetated swales and buffers, grass median strips, detention basins, wet ponds, or constructed wetlands, infiltration basins, and other measures. Filtration systems may be either mechanical (e.g., oil/water separators) or natural (e.g., bioswales and settlement ponds). Selection and implementation of these measures would occur on a project-by-project basis depending on project size and stormwater treatment needs of the site-specific project. NPDES MS4 permittees are also required to develop and enforce ordinances and regulations to reduce the discharge of sediments and other pollutants in runoff and must verify compliance. For each site, NPDES Construction General permittees are also required to develop a Stormwater Pollution Prevention Plan (SWPPP) that identifies best management practices (BMPs) to reduce potential construction impacts.

Each construction contractor's Qualified SWPPP Developer would prepare the SWPPP, which would identify stormwater BMPs that minimize erosion and sedimentation that may result from temporary changes in drainage patterns, including BMPs for temporary drainage systems and temporary stream diversion and dewatering. All Qualified SWPPP Developers must be trained to ensure that SWPPPs are prepared according to the requirements of the permit. The construction contractor's Qualified SWPPP Practitioner would be responsible for implementing

the SWPPP. As part of that responsibility, the effectiveness of construction BMPs would be monitored before, during, and after storm events. Records of these inspections and monitoring results would be submitted to the RWQCBs as part of the annual report required by the permit.

In addition, all projects, including those that would disturb less than 1 acre, would be subject to CALGreen requirements related to stormwater drainage that have been designed to prevent or reduce discharges of sediments, chemicals, and wastes through BMPs that include on-site retention and filtration. Smaller projects may also be subject to additional requirements, which vary by local jurisdiction. In many cases, stormwater drainage measures and compliance with RWQCB Municipal Regional Stormwater Permit Order No. 2011-0083 Provision C.3 may be required by local jurisdictions as standard conditions of approval for building permit applications.

BMPs are used to protect surface water and groundwater quality and meet regulatory standards by removing or substantially lessening the volume of pollutants that flow off-site and into surface water or groundwater. Typical BMPs include:

- Water all exposed surfaces 2–3 times per day, maintaining soil moisture at a minimum of 12 percent.
- Cover haul trucks transporting soil, sand, or other loose material.
- Cover on-site dirt piles or other stockpiled particulate matter, install wind breaks, and employ water and/or soil stabilizers to reduce wind-blown dust emissions.
- Limit vehicle speeds on unpaved roads and surfaces to 15 mph.
- Complete roadway, driveway, and sidewalk paving as soon as possible. Pave building pads as soon as possible after grading.
- Phase excavation, grading, and ground-disturbing construction activities to reduce the extent of disturbed surfaces at any given time.
- Operate transfer processes involving a free fall of soil or other particulate matter in such a manner as to minimize the free fall distance and fugitive dust emissions.
- Wash off trucks and equipment, including their tires, before they leave the site.
- Plant vegetative ground cover in disturbed areas as soon as possible and irrigate it appropriately until vegetation is established.
- Store hazardous materials used on the construction sites, such as fuels and solvents, in covered containers that are protected from rainfall, runoff, and vandalism.

Operations Impacts

Following construction, common urban pollutants associated with sustained, expanded use of household hazardous materials, herbicides and pesticides, and erosion from soil disturbance

could be transported in runoff and potentially adversely affect the quality of receiving surface waters or groundwater.

Common urban pollutants (e.g., petroleum hydrocarbons, lubricants, herbicides and pesticides, sediments, and metals generated by the wear of automobile parts) could be transported in runoff and washed by rainwater from rooftops and landscaped areas into local drainage networks, potentially adversely affecting the quality of receiving surface waters or groundwater. Managed landscaped areas could provide a source of nutrients, weed abatement herbicides, and irrigation runoff. Contributions of these contaminants and other common urban pollutants to stormwater and non-stormwater runoff could degrade the quality of receiving waters if not properly managed. During the dry season, vehicle travel and other urban activities release contaminants on impervious surfaces and in landscaped areas, where they can accumulate until the first storm event. During this "first flush," concentrated pollutants can be transported via runoff to stormwater drainage systems. Contaminants can also be released during the dry season as a result of overirrigation and other urban water uses (e.g., car washing, hosing down paved surfaces). Runoff during storm events and non-stormwater flows (e.g., overirrigation) can transport contaminants into stormwater drainage systems that discharge into rivers, agricultural ditches, sloughs, and channels and ultimately could degrade the water quality of any of these water bodies. Contaminated runoff can also infiltrate into groundwater basins and negatively affect groundwater quality.

State and local agencies require developments to implement BMPs and control measures, adhere to NPDES permit requirements, and comply with local drainage standards. Drainage plans would be consistent with the San Francisco Bay RWQCB MS4 NPDES permit as well as any applicable local drainage control requirements that exceed or reasonably replace regional measures to protect receiving waters from pollutants. In addition, NPDES Provision C.3 requirements include post-construction drainage control requirements that address the volume of off-site flows, which can be effective in reducing sedimentation effects on downstream receiving waters. Baylands and cumulative projects would be required to be planned, designed, and developed to (1) protect areas that provide important water quality benefits necessary to maintain riparian and aquatic biota and/or are particularly susceptible to erosion and sediment loss; (2) limit increases in the extent of impervious areas; (3) limit land disturbance activities, such as clearing and grading, and cut-and-fill to reduce erosion and sediment loss; (4) limit disturbance of natural drainage features and vegetation; and (5) reduce erosion and, to the extent practicable, retain sediment on-site during and after construction.

The following BMPs typically are used during post-construction operation of land uses:

- Provide for oil filtration of stormwater before discharge.
- Use integrated pest management methods to minimize the use of potentially hazardous chemicals in landscaped areas.

- Handle, store, and apply potentially hazardous chemicals in accordance with applicable laws and regulations.
- Implement erosion control and revegetation programs for reestablishing native vegetation on slopes in undeveloped areas.
- Use constructed wetland, infiltration basin, or bioretention in areas where habitat for fish and other wildlife could be threatened by pollutants in stormwater discharge.

Implementation of Water Quality Protection Requirements

Clean Water Act Section 303(d) requires states to evaluate water quality-related data and information, develop a list of waters that do not meet established water quality standards (referred to as "impaired"), and develop a TMDL for every pollutant/water body combination on the list. This includes the development of a loading capacity that is allocated among various point sources and nonpoint sources. The San Francisco Bay RWQCB has identified nearly 350 listings for approximately 130 water bodies, including the Bay itself, that are classified as impaired under Clean Water Act Section 303(d). Standards have been developed for approximately 120 of these listings, including San Francisco Bay. Water quality constituents addressed through existing TMDLs include mercury and sediment loading.

Permits for discharge from point sources are issued through the NPDES program. In addition, several jurisdictions in the San Francisco Bay area have adopted BMPs and ordinances that address runoff resulting from new development. Where TMDLs have been established, compliance with the standards (which are required through the NPDES permitting process) would substantially address the potential to contribute to existing pollution.

Cumulative Impact Conclusion

Construction Impacts

Less than significant cumulative construction impacts on surface and groundwater quality would result for the following reasons:

- Baylands development, in combination with past, present, and probable future projects, would each be required to adhere to the most current NPDES permits, which are designed to minimize water quality impacts, taking into account the requirements needed to be placed on individual projects to protect the quality of receiving waters from the cumulative impacts of these individual projects on a regional basis.
- Water quality standards incorporated into permit requirements are periodically updated and guided by regional water quality issues such that future development must adhere to standards that would minimize potential impacts through ensuring that stormwater runoff is given appropriate treatment, if necessary, prior to off-site discharge as a means of protecting the quality of receiving waters.

- Treatment controls are generally designed to treat stormwater runoff to the maximum extent practical and have made vast improvements over practices that were in effect for older past projects.

Operations Impacts

State and local agencies require developments, including the Baylands and each cumulative project, to implement BMPs and control measures, adhere to NPDES permit requirements, and comply with local drainage standards. Drainage plans for these projects would be consistent with the San Francisco Bay RWQCB MS4 NPDES permit as well as any applicable local drainage control requirements that exceed or reasonably replace regional measures to protect receiving waters from pollutants. In addition, NPDES Provision C.3 requirements include post-construction drainage control requirements that address the volume of off-site flows, which can be effective in reducing sedimentation effects on downstream receiving waters.

Baylands and cumulative projects would be required to be planned, designed, and developed to (1) protect areas that provide important water quality benefits necessary to maintain riparian and aquatic biota and/or are particularly susceptible to erosion and sediment loss; (2) limit increases in the extent of impervious areas; (3) limit land disturbance activities, such as clearing and grading, and cut-and-fill to reduce erosion and sediment loss; (4) limit disturbance of natural drainage features and vegetation; and (5) reduce erosion and, to the extent practicable, retain sediment on-site during and after construction.

Thus, a less than significant cumulative impact would result.

Impact HWQ-2: Groundwater Recharge and Sustainable Groundwater Management

As described in Section 4.16, *Utilities, Services Systems, and Water Supply*, Baylands development would not use local groundwater resources from the Visitacion Valley Basin (DWR Basin No. 2-32) over which the proposed water service expansion area is located. The majority of the Cal Water South San Francisco District overlies the Westside Basin (DWR Basin No. 2-35), from which Cal Water only pumps groundwater to supply the South San Francisco District. No groundwater from the Visitacion Valley Basin would be used for potable or non-potable purposes.

The Westside Basin is not adjudicated and, in its recent evaluation of California groundwater basins, DWR determined that the Westside Basin was not in a condition of critical overdraft and was a low priority basin.

Cal Water operates five groundwater production wells within its South San Francisco District service area. From 2005 to 2023, the Cal Water South San Francisco District met up to 19 percent of its water demand from groundwater, excluding purchased in-lieu groundwater credits, and up to 23 percent including in-lieu groundwater credits purchased from the SFPUC.

Historical groundwater pumping in the Westside Basin by four municipal groundwater users (Cal Water, San Francisco, Daly City, San Bruno) from 2010 through 2020 averaged 5,090 AFY, of which 505 AFY was by Cal Water. The Baylands Water Supply Assessment conservatively assumed total projected groundwater pumping by the SFPUC, Cal Water, Daly City, and San Bruno would be equal to each agency's agreed-upon pumping limitation from 2020 through 2045, of which Cal Water is projecting to pump up to 1,534 AFY.

Cumulative Impact Conclusion

As described in Section 4.16, *Utilities, Services Systems, and Water Supply*, Baylands development would not use local groundwater resources. In addition, the Specific Plan and future development projects within Sierra Point would be required to participate in Cal Water's Development Offset Program. The Baylands Water Assessment concludes that the result of such participation is no net increase in water demand from the Specific Plan or future development projects within the proposed water service expansion area (see discussion of Impact UTL-1 in Section 4.16 for more detail). Because groundwater pumping within the Westside Basin would be consistent with the amounts agreed by the SFPUC, Cal Water, Daly City, and San Bruno as part of the Regional Groundwater Storage and Recovery Project, no significant cumulative impact on groundwater resources or sustainable groundwater management would result.

Impact HWQ-3: Flood Hazards

Projected development within the San Francisco Bay Hydrologic Region would substantially increase the extent of impervious surface through the addition of new paved areas and building rooftops. This increase in impervious surface area would increase the amount of stormwater runoff and cause runoff to discharge at a greater rate, leading to higher peak flows during storm events. The net result of such development would be to increase the potential for stormwater to cause flood conditions either as the result of (1) increased stormwater flow and flow rates, or (2) the potential for storm drains and small channels in urban areas to become blocked or surcharged during intense short-duration storms.

Drainage plans for development of the Baylands and cumulative projects would each be required to comply with the San Francisco Bay RWQCB MS4 NPDES permit and any applicable local drainage control requirements that exceed or reasonably replace measures to control the rate of stormwater runoff. NPDES Provision C.3 includes postconstruction drainage control requirements that address the volume of off-site flows. As described above, the Baylands and cumulative project development are required to plan, design, and develop sites to limit both increases in the extent of impervious areas and disturbance of natural drainage features. Under Provision C.3, the San Francisco Bay RWQCB requires designs that prevent increases in runoff flows from new development and redevelopment projects. In some cases, adherence to NPDES Provision C.3 requirements may result in improved detention of stormwater, compared to existing conditions, through implementation of low impact development (LID) drainage control

measures, which typically include bioretention facilities, rain gardens, vegetated rooftops, rain barrels, and permeable pavements. Projects that would disturb less than 1 acre would be subject to CALGreen requirements related to stormwater drainage. Projects would also generally comply with the design guidelines established in the Stormwater Best Management Practice Handbook: New Development and Redevelopment (CASQA 2003) to minimize increases in both the volume and rate of stormwater runoff.

Baylands development would, and cumulative projects could, require the expansion or construction of new stormwater drainage facilities consistent with state water quality standards and applicable local ordinances and design standards. These may include on-site detention ponds and upgrades to off-site stormwater transmission (e.g., storm drain improvements, culvert upgrades, or enhanced flood protection along natural drainageways used for stormwater conveyance) that attenuate flow from sites and facilitate conveyance. Local development review processes would typically require preparation of hydrologic engineering reports to demonstrate projects would not substantially increase the rate or amount of off-site flow, as well as to demonstrate the capacity of off-site infrastructure to accommodate flows. Based on local conditions and applicable local requirements, on-site LID measures to reduce flow would be incorporated into projects.

Projected land development within the San Francisco Bay Hydrologic Region would be required to maintain pre-project hydrology in accordance with federal, state, and local stormwater management regulations. In addition, local ordinances generally provide prescriptive requirements related to infrastructure capacity and design and limit the potential for development to increase off-site flows so as to cause or exacerbate flood conditions. All projects that would disturb 1 acre or more would be subject to San Francisco Bay RWQCB requirements that prevent increases in runoff flows from new development and redevelopment projects. The required LID drainage control measures would, in some cases, improve stormwater rates and volumes compared to existing conditions.

Cumulative Impact Conclusion

Because Baylands development, as well as development of each cumulative project, would be required to comply with applicable drainage and flood protection standards that are designed to minimize flood hazards, significant cumulative impacts would not result.

Impact HWQ-4: Release of Pollutants Due to Flood and Tidal Action, Sea Level Rise-Induced Changes to Groundwater, Tsunami, or Seiche

As discussed above, Baylands systems are in place to address and minimize impacts related to flooding and release of pollutants during storm events. As discussed in Draft EIR Section 4.14, *Hydrology and Water Quality*, the water table rise that would occur as a consequence of sea level rise would be limited to two feet or less within the Specific Plan area due to the leachate

collection system that will be installed as part of final landfill closure prior to site development. Because most of the western portion of the Baylands would be raised by proposed site grading by 8 to 12 feet, Specific Plan development would not be subject to flooding due to emergent groundwater. Without the occurrence of emergent groundwater, this mechanism would not release pollutants. In addition, Baylands development is not subject to tsunami hazards. While the proposed on-site water storage facility within the Baylands has the potential for seiche impacts, the facility would be designed to withstand expected shaking in an earthquake without rupture. Finally, there are no upstream or downstream facilities within which the Baylands water storage facility could combine to result in a cumulative seiche hazard impact.

Cumulative Impact Conclusion

Baylands development would not combine with past, present, or reasonably foreseeable probable future projects to generate a significant cumulative impact in relation to release of on-site pollutants into the environment as the result of flood or tidal action, sea level rise-induced changes to groundwater, tsunami, or seiche.

7.3.13 GEOLOGY, SOILS, AND SEISMICITY

a. Geographic Context and Method of Analysis

The geographic context and methodology of analysis for cumulative geology, soils, and seismicity impacts are identified in **Table 7-23**. The full list of cumulative projects used in list-based analyses is provided in **Table 7-2**.

b. Cumulative Impacts: Would the Baylands Specific Plan, in conjunction with past, present, and probable future projects, result in significant cumulative geology, soils, and seismicity impacts?

Baylands development, combined with the above-referenced cumulative projects, would increase resident and temporary population in an area subject to substantial seismic risks and hazards. However, each cumulative project, including Baylands development, would be required to meet building code and related safety design requirements that address the various seismic and geologic hazards present in the Bay Area, thereby minimizing cumulative geology and soils impacts. Development and infrastructure projects are required to meet the most recent geologic and seismic design standards, which are more stringent than older codes and practices, making new structures likely to perform better than older structures in the event of a significant seismic event. Compliance with applicable building and other codes and design requirements, as would be implemented for all present and future cumulative projects, would provide adequate protection for life and property.

Table 7-23: Geographic Context and Methodology for Analysis of Cumulative Biological Resources Impacts

	Geographic Context	List- or Projections-Based Analysis
Impact GEO-1 Rupture along a Known Fault	Lands through which an active fault passes that also passes through the Baylands.	There are no known faults crossing through the Baylands; therefore, no cumulative impact to which Baylands development might contribute would occur.
Impact GEO-2 Strong Seismic Ground Shaking	Nine-county San Francisco Bay Area region.	Projections-based analysis of land development and infrastructure identified in Plan Bay Area 2050.
Impact GEO-3 Seismic-Related Ground Failure	Nine-county San Francisco Bay Area region.	Projections-based analysis of land development and infrastructure identified in Plan Bay Area 2050.
Impact GEO-4 Landslide, Mudslide, or Debris Flow	Lands within the Baylands as well as lands: • Within upstream watersheds draining into the Baylands; • Draining into Brisbane Lagoon; and • Downstream of the Baylands draining into San Francisco Bay.	There are no cumulative projects that could combine with Baylands development to form cumulative impacts.
Impact GEO-5 Expansive Soils and Soil Corrosivity	Lands within and adjacent to the Baylands.	List-based analysis, including the following projects in addition to the Baylands Specific Plan: • Brisbane General Plan (Cumulative Projects AA, BB, 1, 2, 4) • San Francisco portion of the San Francisco/San Mateo Bi-County Priority Development Area (Cumulative Projects 5–8) • Oyster Point (Cumulative Projects 12–18, 24–26, 29, 33)
Impact GEO-6 Paleontological Resources	Nine-county San Francisco Bay Area region.	Projections-based analysis of land development and infrastructure identified in Plan Bay Area 2050.
Impact GEO-7 Use of Septic Tanks and Alternative Wastewater Disposal systems	Nine-county San Francisco Bay Area region.	Since Baylands development would be served by a municipal sewer system, it would not combine with past, present, or probable future projects to form cumulative impacts.

Impact GEO-1: Loss, Injury, or Death as the Result of Rupture along a Known Earthquake Fault

There are no known faults crossing through the Baylands. Thus, Baylands development would not contribute to a related cumulative impact.

Impact GEO-2: Strong Seismic Ground Shaking

The San Francisco Bay Area has a nearly three in four chance of experiencing a magnitude 6.7 or greater earthquake over the next 30 years (MTC/ABAG 2021). The shaking intensity of the next significant earthquake at any given location depends on the causative fault and the distance to

the epicenter, the earthquake's magnitude and duration of shaking, and the characteristics of underlying geologic materials. The potential for damage or loss during a magnitude 6.7 or greater earthquake could be substantial.

In general, ground shaking is more severe in softer sediments where surface waves can be amplified, causing a longer duration of ground shaking compared to bedrock materials. Areas where bedrock is exposed or located at relatively shallow depth tend to experience surface waves from an earthquake as more of a sharp jolt, compared to other areas. Areas located within or near the San Francisco Bay shoreline where alluvial sediments tend to be thicker, especially in areas where non-engineered fill or loose alluvial materials are present, could experience considerable ground shaking.

To reduce impacts related to ground shaking, Baylands and cumulative projects development would be required to comply with the current version of the California Building Code (CBC) at the time of building permits. Compliance with the CBC's regulatory requirements and applicable local ordinances would be ensured during the building permit review process for buildings and construction plan review for infrastructure.

Baylands and cumulative development must comply with CBC Chapter 16, Section 1613, which provides earthquake loading specifications for structures and associated attachments that must also meet the seismic criteria of ASCE Standard 07-05. To determine seismic criteria for proposed improvements, geotechnical investigations would be prepared by state-licensed engineers and engineering geologists to provide recommendations for site preparation and foundation design, as required by CBC Chapter 18, Section 1803. Geotechnical investigations would also evaluate hazards such as liquefaction, lateral spreading, landslides, and expansive soils in accordance with CBC requirements and the California Geological Survey's *Guidelines for Evaluating and Mitigation Seismic Hazards in California* (Special Publication 117A 2008), where applicable.

Required geotechnical studies for Baylands and cumulative development would document underlying soils and bedrock on project sites and determine the response of those underlying materials to ground shaking generated during an earthquake. Site-specific geotechnical investigations would also provide recommendations for methods and materials for all aspects of site development, including site preparation, building foundations, structural design, utilities, and sidewalks and roadways, to remedy any geotechnical conditions related to seismic impacts. In connection with grading, foundation, building, and other site development permits, the local city or county or, in the case of infrastructure project, the responsible agency would review geotechnical investigations and recommendations, imposing needed permit requirements based on the geotechnical recommendations and CBC provisions.

Cumulative Impact Conclusion

While Baylands and cumulative projects development would increase population in an area subject to substantial seismic risks and hazards, each of these projects would be required to meet applicable building code and engineering design requirements to protect public health and safety from the various seismic and geologic hazards present in the Bay Area, thereby reducing cumulative impacts. Development projects would be required to meet the most recent geologic and seismic standards, which are more stringent that older codes and practices, making new structures likely to perform better than older structures in the event of a significant seismic event.

Reliable mechanisms are in place to enforce applicable federal, state, and local regulations and engineering design standards to address site-specific seismic hazards identified in required geotechnical investigations. Required implementation of the recommendations contained in these geotechnical investigations as part of local development review processes would protect public health and safety from substantial risks. In addition, the physical separation between cumulative project sites and differences in the timing of construction of cumulative projects would substantially reduce the potential for site-specific impacts to combine to generate cumulative impacts. Thus, a less than significant cumulative impact would result.

Impact GEO-3: Seismic-Related Ground Failure or Collapse, Liquefaction, or Expansive Soils

Ground failure, including liquefaction, lateral spreading, and subsidence, as a result of an earthquake could occur throughout the nine-county Bay Area depending on site-specific conditions including groundwater level, relative size of soil particles, and density of subsurface materials within 50 feet of ground surface. Damage from earthquake-induced ground failure associated with liquefaction, lateral spreading, and subsidence could be high in buildings with foundations not properly constructed for such hazards. The impacts from ground failure, including liquefaction, lateral spreading, and subsidence, from development of Baylands and cumulative projects development would be addressed through site-specific geotechnical studies prepared in accordance with CBC requirements, the Seismic Hazards Mapping Act, and standard construction design practices. The state provides guidance in CGS Special Publication 117A, which includes uniform guidelines for evaluating seismic hazards other than surface fault rupture, as well as mitigation measure recommendations as required by PRC Section 2695(a). Chapters 6 and 7 of California Geological Survey Special Publication 117A provide standards for site evaluation and provide strategies to address liquefaction. These chapters recommend that geotechnical evaluations determine the amount of liquefiable soil, which may provide an indication of the magnitude of subsidence and/or the presence of a gentle slope and open face, such as a shoreline, where lateral spreading can occur. The Seismic Hazards Mapping Act requires a geotechnical site-specific investigation before any parcel subdivisions or structure permits may be issued, to determine the strength of underlying soils or rock. Subsequent development (excavations,

foundations, building frames, retaining walls, and other building elements) would be required to conform to the current seismic design provisions of the CBC to reduce potential losses from ground failure as a result of an earthquake. CBC Section 1613 requires projects within liquefaction zones to incorporate seismic design features into both grading and construction plans. CBC Chapter 18 includes requirements for geotechnical investigations (Section 1803), as well as foundations (Section 1808). Chapter 18 requires analysis of slope instability, liquefaction, and surface rupture attributable to faulting or lateral spreading, plus an evaluation of lateral pressures on basement and retaining walls, liquefaction and soil strength loss, and lateral movement or reduction in foundation soil-bearing capacity. It also addresses measures to be considered in structural design, which may include ground stabilization, selecting appropriate foundation type and depths, selecting appropriate structural systems to accommodate anticipated displacements, or any combination of these measures. Baylands and cumulative projects would also be required to adhere to local general plan and building code requirements for new development to resist ground failure through modern construction techniques.

Cumulative Impact Conclusion

While Baylands and cumulative projects development would increase population in an area subject to substantial geologic and soils risks and hazards, each of these projects would be required to meet applicable building code and engineering design requirements to protect public health and safety from the various geologic and soils hazards present in the Bay Area, thereby reducing cumulative impacts. Development projects would be required to meet the most recent geologic and soils standards, which are more stringent that older codes and practices, making new structures likely to perform better than older structures in the event of a significant geologic event, as well as better capable of safely accommodating adverse soils conditions.

Reliable mechanisms are in place to enforce applicable federal, state, and local regulations and engineering design standards to address site-specific geologic and soils hazards identified in required geotechnical and soils investigations. Required implementation of the recommendations contained in these investigations as part of local development review processes would protect public health and safety from substantial risks. In addition, the physical separation between cumulative project sites and differences in the timing of construction of cumulative projects would substantially reduce the potential for site-specific impacts to combine to generate cumulative impacts. Thus, a less than significant cumulative impact would result.

Impact GEO-4: Landslide, Mudslide, or Debris Flow

Sloping areas within the Baylands including Icehouse Hill, the slopes of the former Brisbane landfill, and (in the future) embankments for the Geneva Avenue bridge over the Caltrain right-of-way would be constructed to applicable CBC design requirements and would therefore not be prone to rain-induced landslide, mudslide, or debris flow hazards.

Cumulative Impact Conclusion

Baylands development would not combine with past, present, or reasonably foreseeable probable future projects to form cumulative impacts.

Impact GEO-5: Expansive Soils and Soil Corrosivity

Wherever Bay Mud is present, such as along Bayshore Boulevard, and during construction of deep foundations, corrosive and expansive subsurface soils are likely to be encountered. Baylands and cumulative projects would be required to meet applicable building code and engineering design requirements that address expansive soils and soil corrosivity and reliable mechanisms are in place to enforce applicable federal, state, and local regulations and engineering design standards to address site-specific hazards, thereby reducing cumulative impacts. In addition, the physical separation between cumulative project sites and differences in the timing of construction of cumulative projects would substantially reduce the potential for site-specific impacts to combine to generate cumulative impacts.

Cumulative Impact Conclusion

Because (1) Baylands and cumulative development would be required to comply with applicable building code and engineering design requirements, and (2) the physical separation between cumulative project sites and differences in the timing of construction of cumulative projects would substantially reduce the potential for site-specific impacts to combine to generate cumulative impacts, a less than significant cumulative impact in relation to expansive soils and soil corrosivity would result.

Impact GEO-6: Paleontological Resources and Unique Geologic Features

The likelihood that previously unknown or unrecorded paleontological resources would be encountered within the Baylands is remote, since it is unlikely that grading and construction activities would encounter older bay mud deposits that may be old enough to have fossilized the remains of ancient organisms. In addition, there are no unique geologic features within the Baylands that could be adversely affected. Baylands development would not, therefore, contribute to any cumulative paleontological resource impact.

Impact GEO-7: Use of Septic Tanks and Alternative Wastewater Systems

All Baylands development would be connected to a municipal sewer system and neither septic tanks nor alternative wastewater systems would be used.

Cumulative Impact Conclusion

Baylands development would not contribute to any cumulative impact in relation to septic tanks or alternative wastewater disposal systems.

7.3.14 UTILITIES, SERVICE SYSTEMS, AND WATER SUPPLY

a. Geographic Context and Method of Analysis

The geographic context for analysis of cumulative utilities, service systems, and water supply impacts encompasses the service areas for each of the agencies providing services to the Baylands, as identified in **Table 7-24**. The full list of cumulative projects used in list-based analyses is provided in **Table 7-2**.

Table 7-24: Geographic Context and Methodology for Analysis of Cumulative Utilities, Service Systems, and Water Supply Impacts

	Geographic Context	List- or Projections-Based Analysis
Impact UTL-1 **Water Supply**	California Water Service Company South San Francisco District.	Projections-based analysis.
Impact UTL-2 **New or Expanded Utilities**		
Water Facilities	California Water Service Company South San Francisco District.	Projections-based analysis.
Wastewater Facilities	Bayshore Sanitary District Service Area.	Projections-based analysis.
Drainage Facilities	Lands within the Baylands as well as lands: • Within upstream watersheds draining into the Baylands; • Draining into Brisbane Lagoon; and • Downstream of the Baylands draining into San Francisco Bay.	List-based analysis, including the following projects in addition to the Baylands Specific Plan: • Brisbane (**Table 7-1** projections for General Plan buildout and Cumulative Projects AA, BB, 1–4) • Infrastructure and Remediation Projects (Cumulative Projects A–I) • San Francisco portion of the San Francisco/San Mateo Bi-County Priority Development Area (Cumulative Projects 5–7)
Impact UTL-3; Impact UTL-4 **Solid Waste Diversion; Landfill Capacity**	Recology San Francisco service area.	Projections-based analysis.

b. Cumulative Impacts: Would the Baylands Specific Plan, in conjunction with past, present, and probable future projects, result in significant cumulative utilities, service systems, or water supply impacts?

As discussed above, Baylands development, in combination with Cumulative Projects 1–4 would increase Brisbane's population by approximately 110 percent and nearly triple its employment base between 2015 and 2050. The result of this growth would be a substantial increase in the demand placed on local utilities, service systems, and water supply.

Impact UTL-1: Water Supply

A Water Supply Assessment was prepared and approved by the California Water Company to analyze the adequacy of its water supply for the 2025 Specific Plan project, existing customers, and cumulative development within its three Peninsula districts in normal, dry, and multiple dry years through 2045. The Baylands Water Supply Assessment, which can be found in Appendix P, shows estimated cumulative water supply and demand (see also **Table 7-25**).

Cumulative Impact Conclusion

The Baylands Water Supply Assessment concluded that available water supplies will be sufficient to meet the demands under normal year hydrologic conditions through 2045, inclusive of existing and future development within Cal Water's three Peninsula districts and the proposed water service expansion area under all Bay-Delta Plan Amendment scenarios. Under dry year hydrologic scenarios, projected shortfalls would be addressed through implementation of the District's Water Supply Contingency Plan. In addition, BAWSCA, Cal Water, and the SFPUC are pursuing the development of additional water supplies to improve the SFPUC's Regional Water System and South San Francisco District supply reliability. Thus, a less than significant cumulative impact would result.

Table 7-25: Cumulative Water Supply and Demand (in million gallons per year)

	2025	2030	2035	2040	2045
Normal Year					
Cal Water's Three Peninsula Districts					
Supply	13,800	13,800	13,800	13,800	13,800
Demand	11,371	11,382	11,525	11,683	11,925
Shortfall	None	None	None	None	None
Cal Water's Three Peninsula Districts and Baylands Specific Plan					
Supply	13,800	13,800	13,800	13,800	13,800
Demand	11,371	11,382	11,525	11,683	11,925
Shortfall	None	None	None	None	None
Cal Water's Three Peninsula Districts, Baylands Specific Plan, and Cumulative Projects					
Supply	13,800	13,800	13,800	13,800	13,800
Demand	11,371	11,382	11,525	11,683	11,925
Shortfall	None	None	None	None	None
Single Dry Year (with Bay-Delta Plan Amendment)					
Cal Water's Three Peninsula Districts Water Supply and Demand					
Supply	7,681	7,670	7,764	7,755	6,853
Demand	11,770	11,779	11,925	12,086	12,335
Shortfall	(4,090)	(4,109)	(4,161)	(4,331)	(5,481)
Cal Water's Three Peninsula Districts and Baylands Water Supply and Demand					
Supply	7,681	7,670	7,764	7,755	6,853
Demand	11,770	11,779	11,925	12,086	12,335
Shortfall	(4,090)	(4,109)	(4,161)	(4,331)	(5,481)
Cal Water's Three Peninsula Districts, Baylands Specific Plan, and Cumulative Projects					
Supply	7,681	7,670	7,764	7,755	6,853
Demand	11,770	11,779	11,925	12,086	12,335
Shortfall	(4,090)	(4,109)	(4,161)	(4,331)	(5,481)

SOURCE: EKI, 2025.

NOTE: Specific Plan and other planned developments within the service area are included in District demands after implementation of development offset program. The net annual demands associated with the Specific Plan as presented in Table 7-25 are expected to be met by development offset with and through implementation of Cal Water's Development Offset Program and therefore would not result in a net increase in demands for the SSF District. As such, these demands are not included in Tables 7-25 as additive demands.

Impact UTL-2: Construction and Improvement of Utility and Service System Facilities

Water Facilities

Development of Baylands would result in an increase in potable water demand; however, this demand would be offset by Cal Water's Development Offset Program. The Development Offset Program requires any new residential, commercial, or industrial development within any of the

three Peninsula districts that is projected to increase net demand by more than 50 acre-feet per year (AFY) to pay a special facilities fee, referred to as a "developer offset fee," of $15,400 per acre-feet of net demand increase. The developer offset fee was calculated based on representative alternative water projects in the Bay Area region, and the anticipated yield of those projects, and will be used to fund accelerated water supply projects and expanded Baylands development, in normal hydrologic years.

Under dry year hydrologic scenarios, shortfalls are projected for the City inclusive of the Specific Plan if the Bay-Delta Plan Amendment is implemented as adopted and additional regional supplies are not developed. It is anticipated that dry year shortfalls would be addressed through implementation of the District's Water Shortage Contingency Plan (WSCP), as discussed in the Water Supply Assessment (Appendix P). In addition, as described in Appendix P and in Cal Water's 2020 UWMP, the Bay Area Water Supply & Conservation Agency (BAWSCA), Cal Water, and the SFPUC are pursuing the development of additional water supplies to improve the regional water system (RWS) and District supply reliability.

Cumulative Impact Conclusion

Water supply would be available to serve the future cumulative demands of the existing Cal Water District service area (as well as the Mid-Peninsula and Bear Gulch Districts), Baylands development, and cumulative projects in normal hydrologic years. Under dry year hydrologic scenarios, shortfalls are projected for the City inclusive of the Specific Plan if the Bay-Delta Plan Amendment is implemented as adopted and additional regional supplies are not developed. However, it is anticipated that dry year shortfalls would be addressed through implementation of the District's WSCP. In addition, the development of additional water supplies is being pursued to improve the RWS and District supply reliability.

Wastewater Facilities

Wastewater Collection

Wastewater generated within the Baylands is proposed to be delivered to an on-site water recycling facility that would generate flow comprised of 0.74 mgd of excess wastewater not used by the WRF and 0.05 mgd of waste activated sludge, a byproduct of the membrane bioreactor system delivered directly to the SFPUC for treatment. Since the wastewater collection facilities constructed for the Baylands and all facilities needed to deliver excess wastewater and activated sludge to the SFPUC for treatment would be exclusive to Baylands development, no significant cumulative impact would result.

Wastewater Treatment Facilities

SFPUC's Southeast Water Pollution Control Plant (SEWPCP) currently receives an average dry weather flow of 60 mgd, which accounts for approximately 70 percent of its available dry

weather flow capacity of 85.4 mgd. San Francisco upgraded the SEWPCP wet weather flow capacity to 250 mgd in 1994 to comply with federal regulations requiring a reduction in Combined Sewer Overflow discharges to the Bay. In addition, the North Point Wet Weather Facility operates when the SEWPCP approaches capacity. To further reduce the frequency of combined sewer overflows into the Bay and increase system capacity, the City and County of San Francisco recently constructed a parallel 169-inch combined sewer facility along the San Francisco-San Mateo Countyline directly north of the Baylands.

The City of Brisbane is allowed to convey dry weather sewer discharges of up to 6.0 mgd to the SEWPCP. As identified in the 2017 City of Brisbane Sanitary Sewer System Master Plan (2017 SSMP), current discharges for dry weather and wet weather conditions are approximately 0.72 mgd and 3.6 mgd, respectively.

Cumulative Impact Conclusion

Given that (1) Brisbane's current dry weather discharges to the SEWPCP are approximately 12 percent of the permitted 6.0 mgd discharge to the SEWPCP, and (2) Baylands development, which makes up the bulk of Brisbane's growth, will not discharge stormwater flows to the SEWPCP, Baylands development in combination with past, present, and reasonably foreseeable future projects would not exceed Brisbane's capacity at the SEWPCP.

Since expanded facilities needed to treat Baylands wastewater would be exclusive to the Baylands, no significant cumulative impact would result.

Stormwater Drainage Facilities

The Baylands Specific Plan area is located at the downstream end of the watersheds within which it is located and drains directly to San Francisco Bay and the Brisbane Lagoon. Thus, runoff from the Baylands would not combine with any downstream flows to generate a cumulative impact. As demonstrated in Section 4.14, *Hydrology and Water Quality*, the Specific Plan drainage system has been designed to accommodate stormwater flows from upstream areas.

Development of the LMF would result in approximately 980 linear feet of Visitacion Creek being filled and placed in an underground channel beneath the LMF. The LMF would also displace the Specific Plan's proposed detention basin, which would need to be constructed at another location. The cumulative effect of the LMF and Baylands development outside of the LMF footprint would thus combine to generate a significant cumulative impact in relation to construction of drainage facilities.

Cumulative Impact Conclusion

Baylands development would combine with LMF construction to generate a significant cumulative impact.

Incremental Contribution of Baylands Development to the Significant Cumulative Impact

Baylands development would contribute to the significant cumulative impact by relocating construction of the proposed detention basin outside of the LMF footprint. However, such relocation would not be needed but for the LMF. Thus, the 2025 Specific Plan project would not have a cumulatively considerable contribution to a significant cumulative impact related to impacts of stormwater drainage facilities construction or operation.

Impact UTL-3: Solid Waste Generation; Impact UTL-4, Consistency with Solid Waste Diversion Policies

As documented in the analysis of Impact UTL-3, the Baylands Specific Plan would be consistent with and achieve a diversion rate in excess of applicable solid waste management and reduction statutes, regulations, plans, and policies. However, development of the 121-acre LMF would require excavation of more than 2.1 million cubic yards of waste material from the former Brisbane landfill for reburial of non-hazardous and hazardous wastes at landfills in San Mateo and Kern counties, respectively. LMF construction would therefore be inconsistent with applicable solid waste management and reduction policies.

As presented in **Table 4.16-7**, the Recology Hay Road landfill to which solid waste from the Baylands that could not be reused or recycled would be delivered is projected to reach full capacity in 2077 based on projected development within Recology San Francisco's service area. The addition of Baylands development along with future growth within Recology's service area would have minimal, if any, effect on the projected lifespan of the Hay Road landfill due to the Baylands high projected waste diversion rate (90 percent to be achieved by 2035 with a 95 percent diversion rate to be achieved by 2040) and San Francisco's zero waste goal (SFEnvironment 2021).

Cumulative Impact Conclusion

While LMF construction would be inconsistent with applicable solid waste management and reduction policies, other projects, including Baylands development outside of the LMF footprint, would be consistent with these policies. Thus, no significant cumulative impact would result.

Landfill capacity would be available through 2077 to accommodate development of Baylands residential, commercial, open space, and other uses combined with the projected waste stream generated within the Recology San Francisco service area that would go to the Hay Road landfill, and a less than significant cumulative impact would result.

7.3.15 PUBLIC SERVICES AND FACILITIES

a. Geographic Context and Method of Analysis

The geographic context for analysis of cumulative public services and facilities impacts encompasses the service areas for each of the agencies providing police, fire protection, school, library, and other public services to be Baylands (see **Table 7-26**). The full list of cumulative projects used in list-based analyses is provided in **Table 7-2**.

Table 7-26: Geographic Context and Methodology for Analysis of Cumulative Public Services and Facilities Impacts

	Geographic Context	List- or Projections-Based Analysis
Impact PUB-1 **New or Altered Public Facilities**		
Police Facilities	City of Brisbane.	Projections-based qualitative analysis for Brisbane (**Table 7-1** projections for General Plan buildout and Cumulative Projects AA, BB, 2–4).
Fire Protection Facilities	City of Brisbane.	Projections-based qualitative analysis for Brisbane (**Table 7-1** projections for General Plan buildout and Cumulative Projects AA, BB, 2–4).
School Facilities	Service area of the Bayshore Elementary School District (Grades PK–8), Brisbane School District (PK–8), and Jefferson Union High School District (Grades 9–12).	List-based qualitative analysis for Bayshore Elementary, Brisbane, and Jefferson Union school districts, including the following projects in addition to the Baylands Specific Plan: • Brisbane (General Plan buildout and Cumulative Projects AA, BB, 2–4) • Daly City (Cumulative Projects 43–47)
Public Library Facilities	City of Brisbane.	Projections-based qualitative analysis for housing and population within Brisbane (**Table 7-1** projections for General Plan buildout and Cumulative Projects AA and BB).
Other Public Facilities	City of Brisbane.	Projections-based qualitative analysis for Brisbane (**Table 7-1** projections for General Plan buildout and Cumulative Projects AA, BB, 2–4).

b. Cumulative Impacts: Would the Baylands Specific Plan, in conjunction with past, present, and probable future projects, result in substantial adverse physical impacts associated with the provision of new or physically altered public service facilities, or the need for new or physically altered public facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives?

Impact PUB-1: New or Altered Public Facilities

Socioeconomic Projections Driving Future City of Brisbane Public Services and Facilities Needs

As shown in **Table 7-27**, the City of Brisbane is projected to grow by 803 residents and 4,400 employees through 2050, excluding residents and employees from the Baylands and Cumulative Projects 2–4.

Table 7-27: Household and Employment Projections for City of Brisbane Buildout, Including Cumulative Projects 2–4

	Households			Employment		
	2015	2050	Change: 2015–2050	2015	2050	Change: 2015–2050
Brisbane General Plan [a]	1,910	2,713	803	10,465	14,865	+4,400
Baylands Specific Plan	—	2,200	2,200	—	19,480	+19,480
Sierra Point Towers	—	—	—	1,220	3,660	+2,440
Guadalupe Quarry Redevelopment	—	—	—	—	1,000	+1,000
Sierra Point Hotel and Life Sciences	—	—	—	—	2,078	+2,078
CITY OF BRISBANE TOTAL	**1,910**	**4,913**	**+3,003**	**11,685**	**41,083**	**+29,398**

SOURCE: City of Brisbane, 2023.

NOTE:

a. Includes Genesis Marina (Cumulative Project 1) but excludes the Baylands Specific Plan and Sierra Point Towers, Guadalupe Quarry Redevelopment, and Sierra Point Hotel and Life Sciences projects (Cumulative Projects 2–4).

As shown in **Table 7-27**, the cumulative projection for Brisbane is to more than double the City's housing and employment base through 2050. The Brisbane Specific Plan would account for 73 percent of the City's population growth and 66 percent of its employment growth.

Police Facilities

The doubling of Brisbane's resident and employee population by the Baylands and Cumulative Projects AA, BB, and 2–4 development would more than double the number of calls for service to the Brisbane Police Department. To accommodate this increased service demand, one or more additional patrol beats will need to be established, including additional personnel, equipment, and a new police substation.

The addition of a 24/7 patrol beat for the area east of Bayshore Boulevard and a police substation within the Baylands would also be necessary and would be established as part of Baylands development, which would generate the majority of future citywide growth in calls for police service. Increases in traffic on US Highway 101 would also increase the number of calls for service to the Brisbane Police Department, as would cumulative development within Brisbane west of Bayshore Boulevard.

Cumulative Impact Conclusion

Baylands development would create the need for an additional police beat and the establishment of a police substation within the Baylands. Brisbane General Plan buildout and development of Cumulative Projects 2–4 would not require police facilities in addition to those required for the Baylands alone. Therefore, no significant cumulative impact would result.

Fire Protection Facilities

The doubling of Brisbane's resident and employee population by development of the Baylands and Cumulative Projects 2–4 would approximately double the number of calls for service to the North County Fire Authority originating from within Brisbane. To accommodate this increased service demand, the North County Fire Authority and City of Brisbane have determined that relocating the City's existing Fire Station No. 81 to a site west of Bayshore Boulevard adjacent to City Hall and then constructing and equipping a new fire station within the Baylands would provide adequate service for projected growth. The relocated fire station would temporarily house a ladder truck company as well as the existing Engine Company No. 81. Once it is constructed and operational, the Baylands fire station would house the aerial ladder company and a new squad.[397]

Cumulative Impact Conclusion

Baylands development would create the need for relocating the City's existing fire station and establishment of a new fire station within the Baylands. Brisbane General Plan buildout and development of Cumulative Projects 2–4 would not require fire protection facilities in addition to those required for the Baylands alone. Therefore, no significant cumulative impact would result.

School Facilities

Although student generation is primarily the result of residential development, current state law permits parents to register their children for school based on their place of employment, as well as their place of residence. Thus, commercial and industrial cumulative projects, even though they do not all contain residential development, would generate new students. These

[397] "Squad" refers to a specialized company whose primary focus may be suppression but that carries specialized equipment and is trained to perform hazmat, rescue, and other special functions.

projects, together with Baylands development, would combine to create the need for new or expanded school facilities.

New residential and non-residential development within the Bayshore Elementary School District, Brisbane School District, and Jefferson Union High School District would generate new students, increasing enrollment within the three districts, each of which has experienced reduced enrollment over the past several years. To accommodate Specific Plan development, a new middle school would be constructed within the Baylands, and the Bayshore School within Daly City would be converted to serve pre-kindergarten through grade 5. New residential and non-residential development within the Bayshore Elementary School District, Brisbane School District, and Jefferson Union High School District would also be required to pay school impact fees. Payment of school facilities impact fees mandated under SB 50 is the exclusive method of considering and mitigating the direct impacts on school facilities.

In addition, Baylands development in combination with development projects within the Bayshore, Brisbane and Jefferson Union school districts could indirectly cause environmental impacts as the result of new school construction and improvements to existing schools.

Because the buildout of cumulative projects within Brisbane and Daly City has not been fully defined, a precise determination of commercial/industrial square footage cannot be determined. Based on the available information presented in **Table 7-2**, development of cumulative projects in Brisbane and Daly City would include approximately 3,270 dwelling units, 3.55 million s.f. of commercial and industrial use along with an unknown amount of square footage in Cumulative Projects AA, BB, and 43-47, and 608 hotel rooms. Given that enrollment in the Bayshore, Brisbane, and Jefferson Union school districts is below the districts' historic highs and enrollments have been dropping, it cannot be known at this time how each district would accommodate incoming students from cumulative projects.

During the CEQA review process for individual development projects, as well as for any new or improved school facilities, environmental impacts associated with such projects would be analyzed and would be avoided or reduced through the imposition of conditions of approval and mitigation measures imposed on those directly involved in the development, construction, or expansion activities.

Cumulative Impact Conclusion

Because payment of school facilities impact fees mandated under SB 50 is the exclusive method of mitigating direct impacts on school facilities, no significant direct cumulative impact would result. However, since the extent to which cumulative projects within the Bayshore, Brisbane, and Jefferson Union school districts would require new or improved school facilities cannot be known at this time, construction of new or improved school facilities could result in significant cumulative impacts.

Incremental Contribution of Baylands Development to the Significant Cumulative Impact

Construction of the middle school within the Baylands would contribute to significant impacts of Specific Plan development and have a cumulatively considerable contribution to a significant cumulative impact related to construction of schools.

Public Libraries

The City's new library on Visitacion Avenue was designed to accommodate population growth associated with residential buildout of the Brisbane General Plan, not including Baylands housing. The population increase generated by Baylands development would approximately double the City's population, exceed the library's capacity, and cause deterioration of the existing facility. A significant cumulative impact in relation to library expansion would result.

Incremental Contribution of Baylands Development to the Significant Cumulative Impact

Because the City's existing library was designed to accommodate Brisbane's population growth outside of the Baylands, impacts to the library and the need for new or expanded library facilities would not occur but for the 2025 Specific Plan project. The Specific Plan would have a cumulatively considerable contribution to a significant cumulative impact related to library facilities.

Other Public Facilities

The 3,003 new households projected for Brisbane through 2050 will increase the City's population from 4,344 to approximately 11,135. Through 2050, the number of jobs within Brisbane would increase by 29,398 to 41,083. The approximate doubling of Brisbane's population and employment base through 2050 would require expansion of the City's current corporation yard at the intersection of Tunnel Avenue and Lagoon Road to an approximately 2.5-acre site with the following characteristics:

- Generally square in shape;
- Level;
- Fully remediated; and
- With direct connection to a minimum roadway classification of collector.

Because the existing corporation yard is of adequate size to serve Brisbane General Plan buildout along with Cumulative Projects 2–4, it would not need to be relocated and expanded in the absence of Baylands development. Thus, no significant cumulative impact would result.

7.3.16 RECREATIONAL RESOURCES

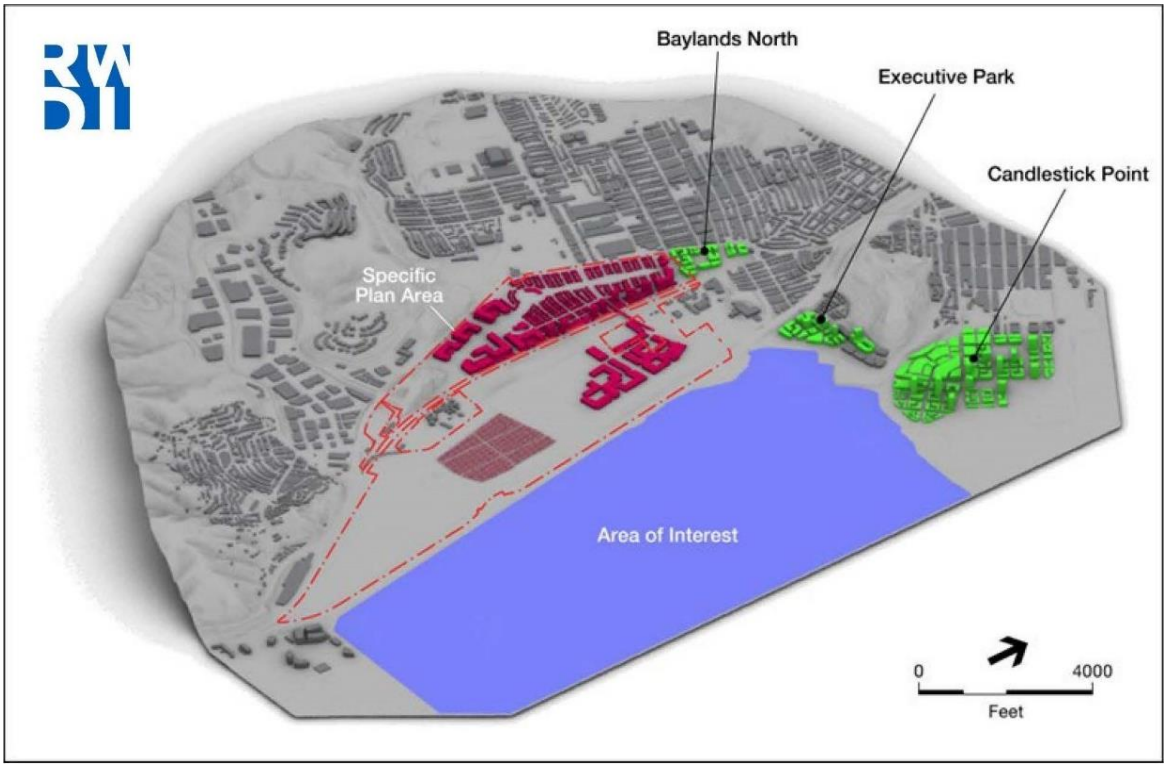
a. Geographic Context and Method of Analysis

The geographic context and methodology of analysis for cumulative recreational resources impacts are identified in **Table 7-28**. The full list of cumulative projects used in list-based analyses is provided in **Table 7-2**.

Table 7-28: Geographic Context and Methodology for Analysis of Cumulative Recreational Resources Impacts

	Geographic Context	List- or Projections-Based Analysis
Impact REC-1 Physical Deterioration of Existing Recreational Facilities	City of Brisbane.	Projections-based analysis.
Impact REC-2 Physical Effects on the Candlestick Point State Recreation Area	Lands adjacent to the offshore portions of the Candlestick Point State Recreation Area due east of the Baylands and south of Candlestick Point (see **Figure 7-4**).	List-based analysis, including the following projects in addition to the Baylands Specific Plan: • Baylands North (Cumulative Project 6) • Executive Park Baylands North (Cumulative Project 7) • Candlestick Point Baylands North (Cumulative Project 8)

Figure 7-4: Geographic Context for Analysis of Cumulative Impacts on Windsurfing Resources within the Candlestick Point State Recreation Area



SOURCE: RWDI, 2023

b. Cumulative Impacts: Would the Baylands Specific Plan, in conjunction with past, present, and probable future projects, result in significant cumulative recreation impacts?

Impact REC-1: Substantial Physical Deterioration of Existing Recreational Facilities Due to Increased Use

As noted above, the cumulative buildout for the City of Brisbane, including the Baylands, is an increase of 3,003 dwelling units, 2,200 (73.3 percent) of which would be constructed within the Baylands. Assuming 2.35 persons per dwelling unit for residential development outside of the Baylands, Brisbane's population would grow by 1,887. Pursuant to the provisions of Municipal Code Sections 16.24.010–16.24.070, which authorize the City to require Quimby Act dedications to "provide for adequate and appropriate recreational facilities" at a standard of 4.50 acres per 1,000 residents, cumulative development would be required to provide for approximately 8.5 acres of new park facilities. The Baylands Specific Plan would provide 64.4 acres of improved parkland, resulting in 11.12 acres of improved parkland per 1,000 population, even if residential growth outside of the Baylands is not accompanied by any parkland expansion. This ratio exceeds the 5.05 acres per 1,000 population of parkland currently available to Brisbane residents.

Cumulative Impact Conclusion

By providing substantially more parkland per 1,000 population than is currently available to Brisbane residents, Baylands development would help ensure that Baylands and cumulative development would not increase the use of existing neighborhood and community parks such that substantial physical deterioration of these existing facilities would occur or be accelerated. Thus, no significant cumulative impact would result.

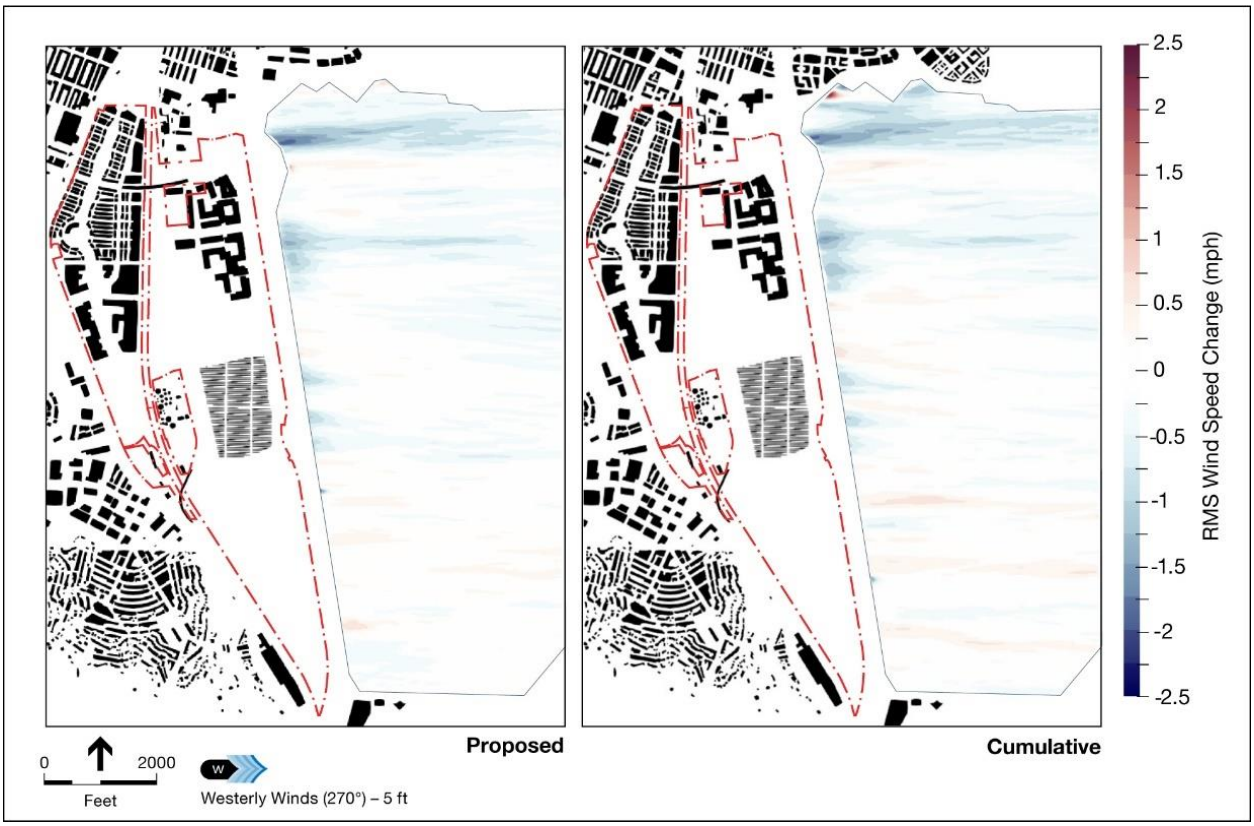
Impact REC-2: Physical Effects on Windsurfing Resources within the Candlestick Point State Recreation Area

As illustrated below, cumulative development projects would cause some additional decrease in wind speeds compared to Specific Plan impacts and increase in turbulence in the case of westerly-northwesterly and northwesterly winds. However, the area affected by cumulative development is generally limited to the northern one-tenth of the primary windsurfing area, closest to the Candlestick Point State Recreational Area launch area.

Wind Speed

With westerly winds, the primary effects of cumulative projects would occur close to the northern shoreline of the primary windsurfing area in an area largely not affected by Baylands development. As illustrated in **Figure 7-5**, cumulative projects would reduce wind speeds by about 1.0 mile per hour along the shoreline.

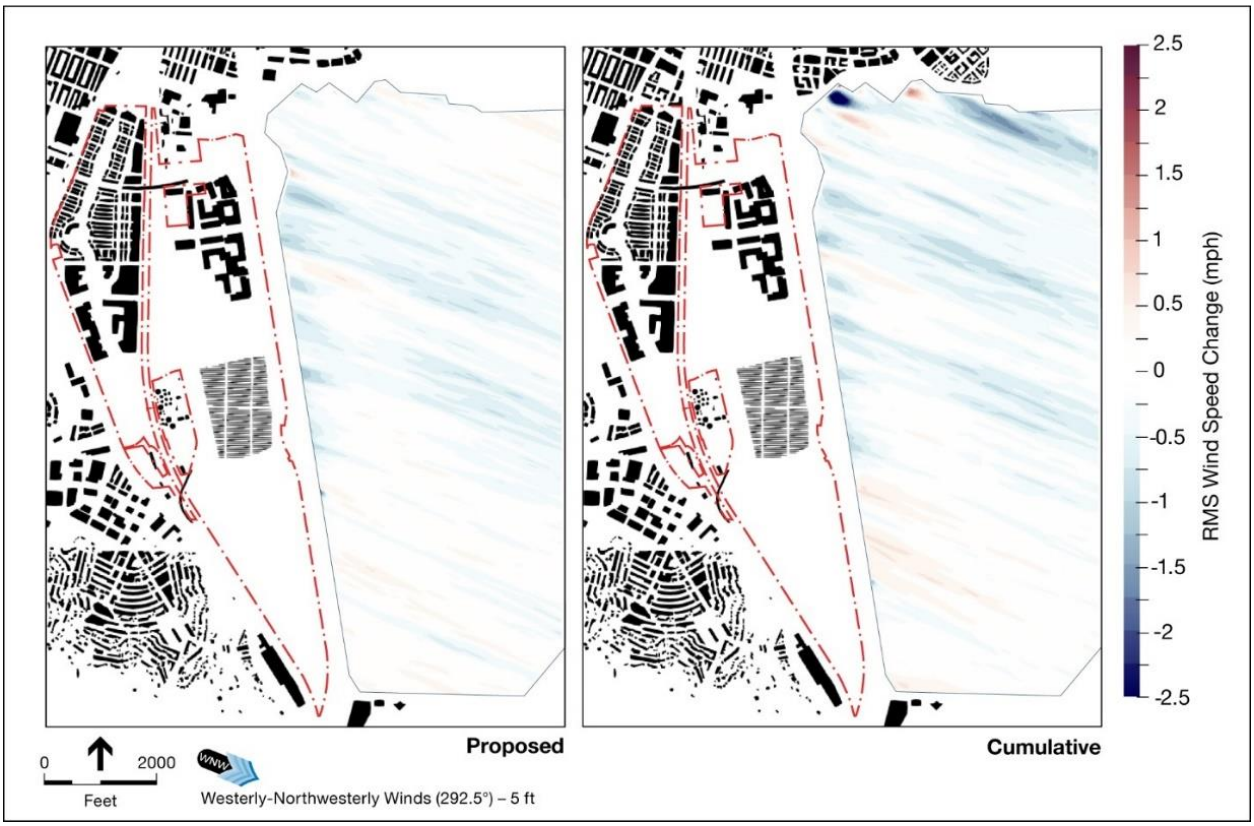
Figure 7-5: Cumulative Changes in Wind Speeds: Westerly Winds



SOURCE: RWDI, 2023.

With westerly-northwesterly winds, the effects of cumulative projects would occur over a larger area close to the shoreline where cumulative projects add wind speed reductions of 1.0 to 2.5 miles per hour (see **Figure 7-6**). Farther south of the shoreline, the effects of cumulative projects would mix with those of Baylands development to expand the offshore area subject to wind speed reduction of 1.0 mile per hour and less.

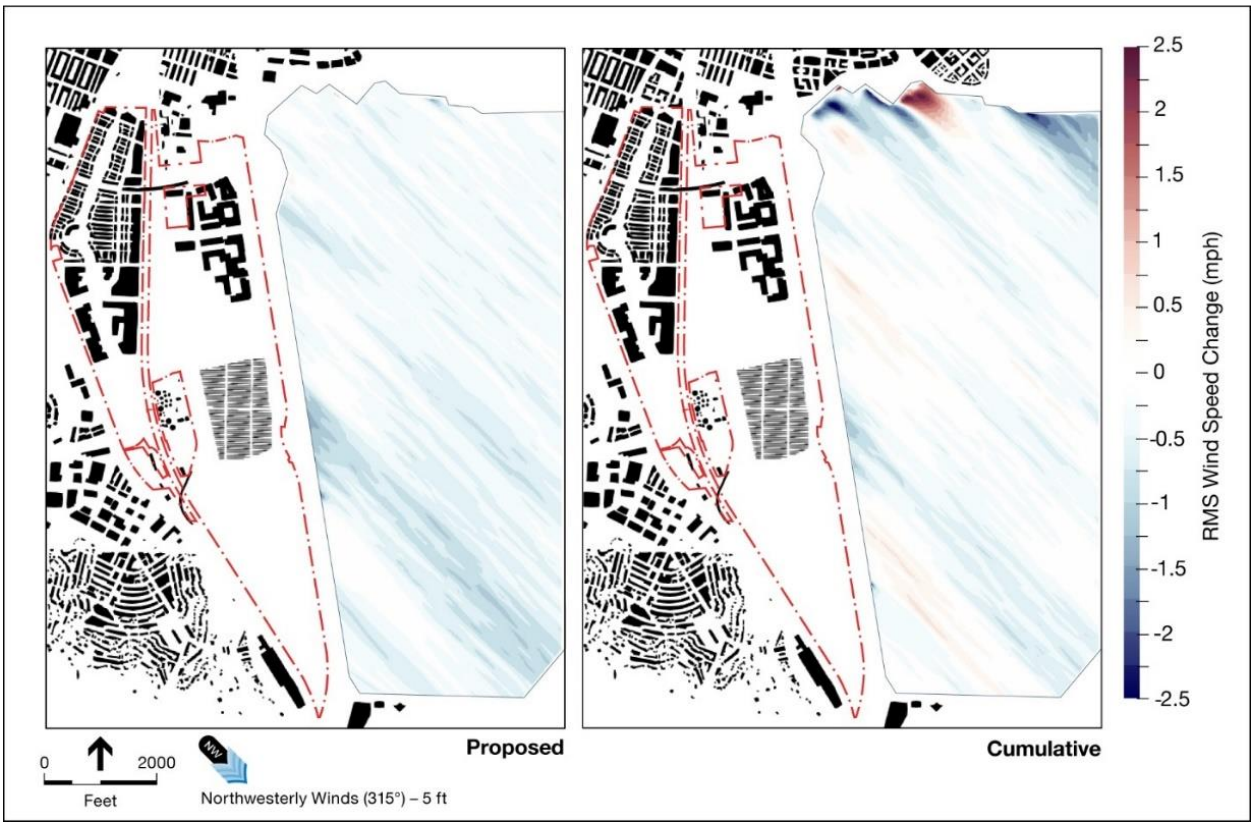
Figure 7-6: Cumulative Changes in Wind Speeds: West-Northwesterly Winds



SOURCE: RWDI, 2023.

With northwesterly winds, the effects of cumulative projects on wind speeds along the north shore of the primary windsurfing area would be more pronounced than would occur with other wind directions (see **Figure 7-7**). Close to the northern shore of the primary windsurfing area, cumulative projects would reduce wind speeds by 1.0 to 2.5 miles per hour. Farther south within the primary windsurfing area, the combined effects of Baylands and cumulative development would tend to result in smaller reductions in wind speed than would occur with Baylands development alone and would result in some areas where minor increases in wind speed would occur.

Figure 7-7: Cumulative Changes in Wind Speeds: Northwesterly Winds

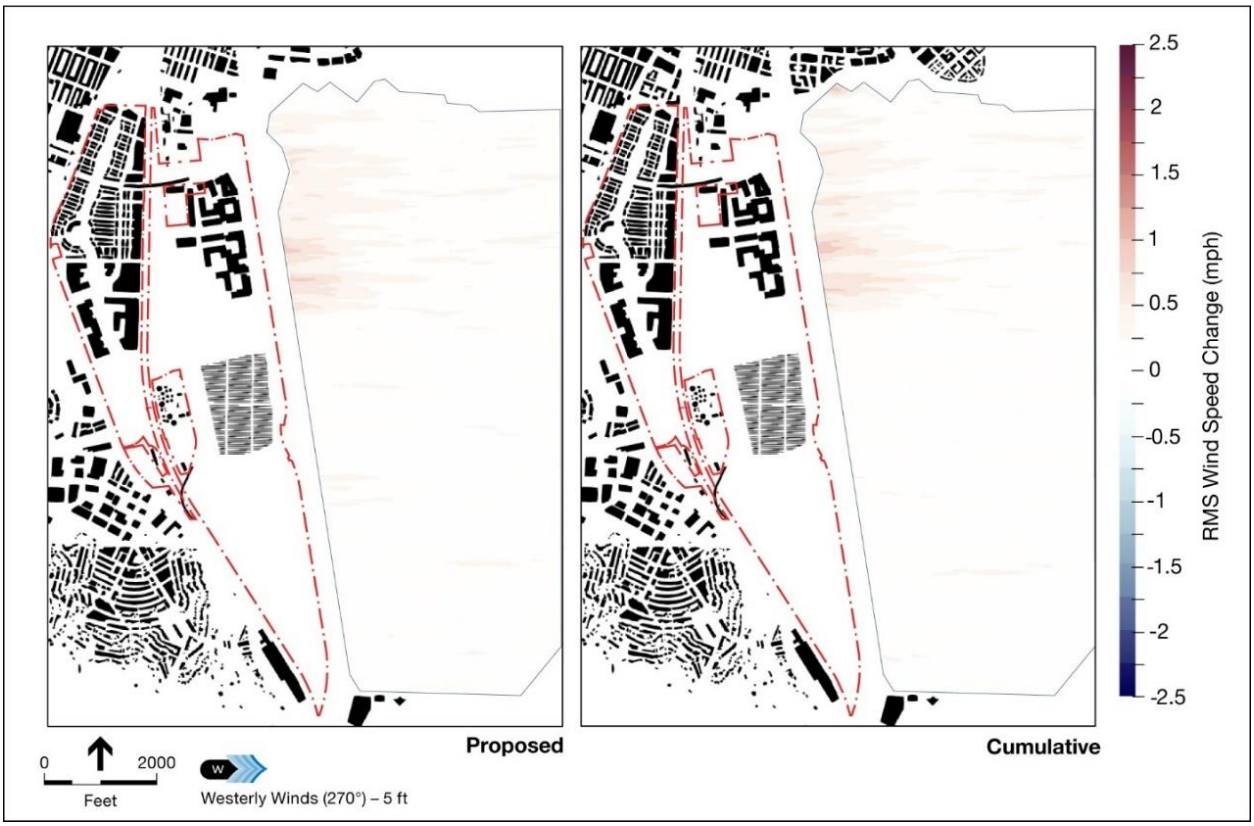


SOURCE: RWDI, 2023.

Turbulence

As shown in **Figure 7-8**, the combined effect of Baylands development and Cumulative Projects 6–8 would be to expand the area where wind speed fluctuations would occur along the northerly shoreline of the primary windsurfing area. Overall, increases in wind speed fluctuations would be minor, and would approach 1.0 mile per hour in a limited area south of the Executive Park project. In addition, a larger area east of the Baylands would experience an increase in wind speed fluctuations of up to 1.0 mile per hour.

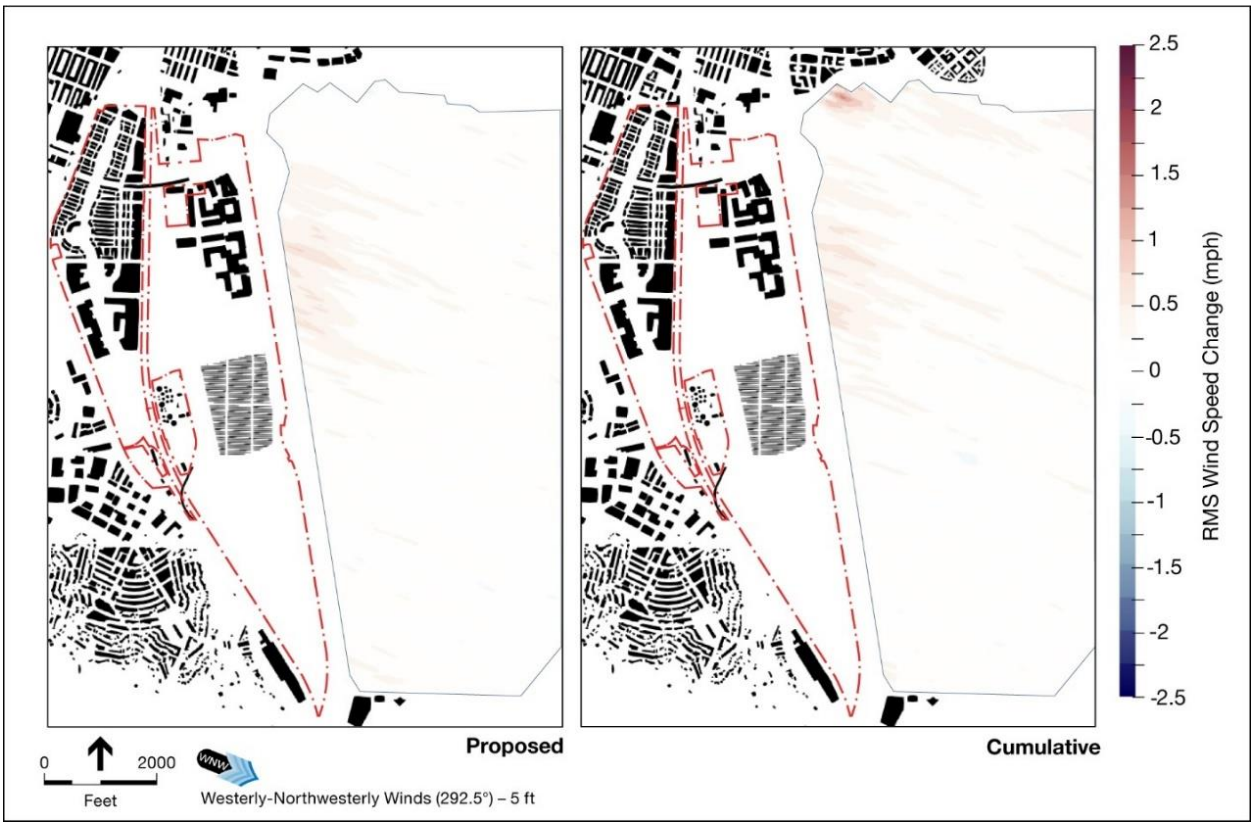
Figure 7-8: Cumulative Changes in Wind Fluctuations: Westerly Winds



SOURCE: RWDI, 2023.

As illustrated in **Figure 7-9**, below, the effects of Cumulative Projects 6–8 on wind speed fluctuations with westerly-northwesterly winds would be more pronounced along the northerly shoreline of the primary windsurfing area where Baylands development would have little or no effect. As illustrated below, cumulative development would increase wind speed fluctuation generally by no more than 0.75 mile per hour with wind speed fluctuation increasing by up to 1.5 miles per hour in a small area south of Executive Park. Cumulative Projects 6–8 would also combine to increase the area subject to wind fluctuation increases of 0.75 mile per hour or less to the south within the primary windsurfing area.

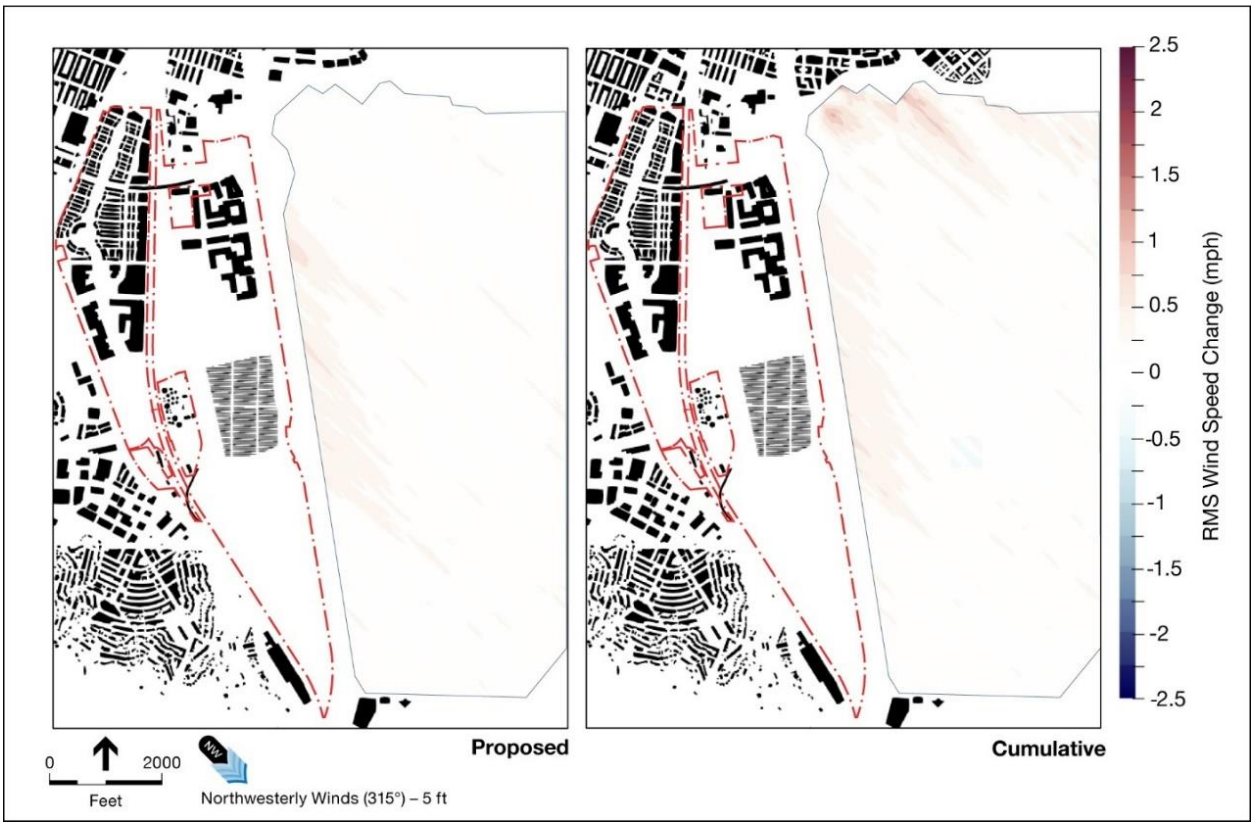
Figure 7-9: Cumulative Changes in Wind Fluctuations: Westerly-Northwesterly Winds



SOURCE: RWDI, 2023.

As illustrated in **Figure 7-10**, wind speed fluctuations caused by Cumulative Projects 6–8 with northwesterly winds would be more pronounced than for other wine speed directions along the northerly shoreline of the primary windsurfing area where Baylands development would have little or no effect. Farther south within the primary windsurfing area, the combination of Baylands and cumulative project development would result in wind speed fluctuation increases of less than 0.5 mile per hour.

Figure 7-10: Cumulative Changes in Wind Fluctuations: Northwesterly Winds



SOURCE: RWDI, 2023.

Cumulative Impact Conclusion

As shown in **Figure 7-5** through **Figure 7-10**, although the combination of Baylands and Cumulative Projects 6–8 would cause some decrease in average wind speeds and increase in turbulence, wind conditions within the majority of the Candlestick Point windsurfing area would not be affected. Areas that would be affected are largely limited to a 300-yard area along the shoreline, and the average changes in wind speed would generally be 1 to 2 mph, with changes in turbulence generally limited to 1 to 1.5 mph.

Thus, Baylands and cumulative development would not substantially degrade the offshore wind-related recreational resource within the Candlestick Point State Recreation Area and a less than significant cumulative impact would result.

7.3.17 WILDLAND FIRE

a. Geographic Context

The geographic context for analysis of cumulative wildland fire impacts encompasses the City of Brisbane and its sphere of influence, as well as the San Bruno Mountain Habitat Conservation

Plan area and areas adjacent to the Baylands designated as a moderate wildland fire hazard area (see **Figure 4.19-1**)as well as lands adjacent to the Baylands that are within a wildland-urban interface (see **Figure 4.19-2**).

b. Impact WLF-1: Exacerbate Fire Risk

As illustrated in **Figure 4.19-1**, a portion of the Specific Plan area is within a moderate wildland fire hazard area, as are large areas to the west of the site. In addition, wildland-urban interface areas, where conditions affecting the combustibility of natural and cultivated vegetation (wildland fuels) and structures or infrastructure (built fuels) would allow for the ignition and spread of fire through these combined fuels are designated along the west side of Bayshore Boulevard within Brisbane and Daly City as well as to the north in San Francisco.

San Bruno Mountain is designated as a high fire hazard zone. The Mountain's slopes are varied, which could contribute to the uncontrolled spread of a wildfire, dependent upon where fire might start, and other important conditions such as wind speed and direction, fuel, and moisture. Due to the location of the mountain on the Bay peninsula between the Pacific Ocean and San Francisco Bay, protection from the Diablo winds, and the high humidity conditions from the fog and overcast conditions common to the area, vegetation is able to absorb and maintain a high fuel moisture level, which could decrease a wildfire's rate of spread.

Development of areas susceptible to wildfire could exacerbate fire risk by introducing human activities into fire-prone open space. Human-caused wildfires tend to be generated by activities such as debris and brush-clearing fires, electrical equipment malfunctions, campfire escapes, smoking, fire play (e.g., fireworks), vehicles, and arson. Development within wildland-urban interface areas between San Bruno Mountain and the Baylands could exacerbate the potential for a wildland fire to spread and cause structural fires within nearby urban areas, as well as to expose more receptors to pollutant concentrations from a wildfire. A significant cumulative impact would result.

Incremental Contribution of Baylands Development to the Significant Cumulative Impact

Baylands development would contribute to the significant cumulative impact by increasing population in the vicinity of San Bruno Mountain and increasing human activity within the San Bruno Mountain State and Regional Park, as well as the number of receptors that could be adversely affected by pollution from a wildland fire. However, the 2025 Specific Plan project would increase North County's firefighting capability commensurate with the size of Baylands development. Baylands development would not have a cumulatively considerable contribution to a significant cumulative impact related to wildland fire.

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CHAPTER 8 ALTERNATIVES

8.1 INTRODUCTION

The identification and analysis of alternatives to a proposed project is fundamental to the environmental documentation and review process. The California Environmental Quality Act (Public Resources Code Section 21002.1(a)) establishes the need to address alternatives in an EIR by stating that, in addition to determining a project's significant environmental impacts and indicating potential means of mitigating or avoiding those impacts, "the purpose of an environmental impact report is … to identify alternatives to the project" that would avoid or lessen the project's significant effects.

Pursuant to the provisions of CEQA Guidelines Section 15126.6(d), this chapter describes and evaluates alternatives to the Baylands Specific Plan, in comparison to the impacts that would result from buildout of the Specific Plan as it has been proposed by the applicant. Included in the identification and evaluation of project alternatives is discussion of the "no project alternative" and identification of the "environmentally superior alternative" as required by CEQA Guidelines Section 15126.6(e).

CEQA Guidelines Section 15126.6 Consideration and Discussion of Alternatives in an EIR

CEQA Guidelines Section 15126.6(a) requires that an EIR describe a reasonable range of alternatives to the proposed project or to the project's location that would avoid or substantially lessen its significant environmental impacts while attaining most, but not necessarily all, of the project's objectives. An EIR need not consider every conceivable alternative to a project but must consider a reasonable range of potentially feasible alternatives that will foster informed decision-making and public participation (CEQA Guidelines Section 15126.6[a]).

Because an EIR must identify ways to mitigate or avoid a project's significant effects on the environment, CEQA Guidelines Section 15126.6(b) emphasizes that the selection of project alternatives must be based primarily on the ability to reduce impacts relative to the proposed project, "even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly."

CEQA Guidelines Section 15126.6(c) requires the EIR to address a "range of reasonable alternatives," including "those that could feasibly accomplish most of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects."

CEQA Guidelines Section 15126.6(d) requires the EIR to "include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project." The environmental effects of alternatives are, however, permitted to be addressed in less detail than those of the proposed project. Additionally, an EIR is not required to analyze alternatives when the effects of the alternative "cannot be reasonably ascertained and whose implementation is remote and speculative" (CEQA Guidelines Section 15126.6[f][3]).

8.2 RATIONALE FOR SELECTION OF ALTERNATIVES

The specific reasons for selection of each alternative addressed in this EIR or rejection of an alternative from further analysis are discussed below. The following general factors were used to define the development, location, and water supply alternatives that are analyzed in this chapter and meet the requirements of CEQA Guidelines Section 15126.6:

- Contributing to a "reasonable range" of alternatives necessary to permit a reasoned choice between the proposed project and alternatives.
- Avoiding or substantially lessening one or more of the Specific Plan's significant environmental effects[398] while achieving the underlying purpose of the Specific Plan along with some but not necessarily all other project objectives.
- Being potentially feasible,[399] considering site suitability, economic viability, availability of infrastructure, property control (ownership), and consistency with applicable plans and regulatory limitations.
- Meeting the requirement to consider a "no project" alternative, including an alternative that provides for the likely outcome should the Specific Plan not be approved.

Neither the CEQA statute, California CEQA Guidelines, nor recent court cases indicate a specific number of alternatives to be evaluated in an EIR. Rather, "the range of alternatives required in an EIR is governed by the rule of reason that sets forth only those alternatives necessary to permit a reasoned choice" (CEQA Guidelines Section 15126[f]). Based on the preceding guidance, alternatives were selected for review that would achieve the underlying purpose of the Specific Plan; meet most of the other project objectives; reduce one or more of the significant impacts of the Specific Plan; and be reasonable, potentially feasible, and not speculative.

8.2.1 SIGNIFICANT UNAVOIDABLE ENVIRONMENTAL EFFECTS OF THE BAYLANDS SPECIFIC PLAN

CEQA requires the alternatives selected for comparison in an EIR to avoid or substantially lessen one or more significant effects of the project being evaluated. To identify alternatives that would avoid or substantially lessen any of the identified significant environmental effects of the Baylands Specific Plan, significant unavoidable impacts must be considered. It is recognized

[398] See Section 8.2.1 for a listing of significant unavoidable impacts.

[399] CEQA Guidelines Section 15364 defines feasible as "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social and technological factors." CEQA Guidelines Section 15126.6(f)(1) states that "Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries … and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site …"

that alternatives aimed at reducing the significant unavoidable impacts of the Specific Plan would also avoid or reduce significant impacts that could be reduced to a less than significant level. The analysis in Chapter 4 (Sections 4.3 through 4.19) of this EIR determined that development associated with the Baylands Specific Plan would result in the following significant unavoidable impacts.

- **Impact AQ-1:** The Baylands Specific Plan would cause a net increase in emissions of non-attainment criteria pollutants (ROG, NO_X, PM_{10}, $PM_{2.5}$) exceeding BAAQMD Regional Criteria Pollutant Significance Thresholds during construction and for operations at the completion of Phase 1 development, as well as at full Specific Plan buildout.
- **Impact GHG-1:** The Baylands Specific Plan would cause a net increase in total greenhouse gas (GHG) emissions generated within the Baylands.
- **Impact NOI-1:** The use of impact pile driving for construction of buildings over 5 stories in height or for the Geneva Avenue bridge in proximity to occupied residential and office buildings would cause unavoidable adverse effects, particularly if multiple pile driving activities were undertaken at the same time, until construction of such buildings is completed.
- **Impact NOI-2:** The aggregate operation of all stationary noise sources would increase noise levels generated within the Specific Plan area as a whole. Because the exact future location and configuration for all of these sources cannot be known at this time, it is not possible to ensure that the aggregate increase in noise levels at specific off-site receptor locations from stationary sources would not result in a permanent noise increase in excess of 5 dBA L_{eq}.
- **Impact NOI-3:** Increased noise levels from Baylands-generated traffic would exceed applicable standards along one roadway segment at the conclusion of Phase 1 development (assumed to occur in 2035), increasing to 3 roadway segments at full Specific Plan buildout (assumed to be 2040).

8.2.2 PROJECT OBJECTIVES

The following identifies the objectives of the Baylands Specific Plan project pursuant to CEQA Guidelines Section 15124(b), which requires an EIR to include a "statement of objectives sought by the proposed project" and "should include the underlying purpose of the project." The **underlying purpose of the Baylands Specific Plan** and the development it permits is to provide for the productive reuse of this brownfield site in a manner that eliminates ongoing ecological damage and ensures the safety of all who will use the Baylands.

Project objectives for the Baylands are to:

- Implement the City's Housing Element by providing a mix of housing types, sizes, and densities that contributes to local and regional housing needs for all economic segments of the community, as well as for families and individuals of all ages and physical abilities.
- Implement the Brisbane General Plan, including General Plan Amendments GP-1-18 (Measure JJ) and GP-1-19.
- Preserve and enhance the site's natural resources and historic features within a system of permanent open space that:
    - Restores and enhances wetlands and natural habitats within the Baylands;
    - Promotes visual connectivity between the Baylands, San Bruno Mountain, and San Francisco Bay;
    - Adapts to climate change and sea level rise; and
    - Provides a range of recreational opportunities and open space experiences for Baylands residents and workers, as well as for the larger Brisbane community.
- Enhance Brisbane's economic vitality by ensuring that Baylands development will be revenue positive for the City.
- Establish the Baylands as a leading model of sustainable development consistent with the principles of the City's Sustainability Framework for the Baylands (Integral Group 2015).
- Attract office-based employment to the Baylands that provides a broad range of high-paying jobs as well as training and advancement opportunities for the community's young adults.
- Enable residents, workers, and visitors to be less dependent on cars.

8.3 BAYLANDS ALTERNATIVES CONSIDERED BUT REJECTED

As required by CEQA Guidelines Section 15126.6 (c), the following identifies alternatives that were considered, but were not evaluated in detail because they would not achieve the underlying purpose of the project, are infeasible, and/or they would not reduce any of the project's significant impacts. As further required by CEQA Guidelines Section 15126.6 (c), a brief explanation of the reasons why each alternative was rejected is also provided.

The alternatives that were considered but rejected are identified in two groups that are summarized in Section 8.3.1 along with the reasons they have been eliminated from further consideration:

3. Alternatives that were analyzed in the Brisbane Baylands Program EIR and were considered during the public hearing process leading to adoption of General Plan Amendment GP-1-18.
4. Additional alternatives that were considered but rejected during the scoping process for the current Specific Plan EIR.

8.3.1 LAND DEVELOPMENT ALTERNATIVES CONSIDERED BUT REJECTED

As part of the previous environmental and planning review of Baylands development leading to certification of the Brisbane Baylands Program EIR and adoption of GP-1-18 and Measure JJ, the 2011 Specific Plan and its variant, as well as two additional concept plan scenarios were evaluated as the "Project," along with alternatives to that project, all of which were considered and ultimately rejected by the Brisbane City Council in favor of adopting General Plan Amendment GP-1-18 and submitting Measure JJ to a public vote. The City Council resolutions and findings rejecting the project and alternatives addressed in the Program EIR can be found at:

- Draft Program EIR – https://archive.brisbaneca.org/baylands-deir
- Final Program EIR – https://archive.brisbaneca.org/feir-documents
- Full Text of Comments on the Draft Program EIR – https://archive.brisbaneca.org/deir-comments

Table 8-1 identifies the concept plans and alternatives analyzed in the Program EIR that were rejected in favor of General Plan Amendment GP-1-18 (Measure JJ). **Table 8-1** also identifies the additional alternatives that were considered during scoping for the current Specific Plan EIR.

Table 8-1: Alternatives Considered but Rejected

Alternative	Description	Reasons for Rejection
Concept Plan Scenarios Analyzed in the Program EIR at an Equal Level of Detail as the "Project"		
2011 Baylands Specific Plan (Developer Proposed Plan)	4,434 residential units 6.9 million square feet (s.f.) of office/retail/industrial/institutional uses Approximately 169.7 acres of "open space/open area," and approximately 135.6 acres of "lagoon" area	Substantial significant unavoidable environmental impacts were identified in relation to: • Aesthetics and Visual Resources • Air Quality

Alternative	Description	Reasons for Rejection
Developer Proposed Plan – Entertainment Variant	Same as the 2011 Specific Plan with retail and office/R&D uses in the northeast portion of the Baylands replaced with entertainment-oriented uses, including a 17,000- to 20,000-seat sports arena, a 5,500-seat concert theater, a multiple-screen cinema, and additional conference/exhibition space and hotel rooms.	• Noise and Vibration • Population and Housing • Traffic and Circulation • Utilities, Service Systems, and Water Supply Overall development intensity was out of character and incompatible with the Brisbane community and adjacent neighborhoods in San Francisco.
Community Prepared Plan	Approximately 7.7 million s.f. of office, industrial, commercial, and institutional uses with no residential development. 330 acres of open space/open area and a 135.6-acre lagoon area.	Substantial significant unavoidable environmental impacts were identified in relation to: • Aesthetics and Visual Resources • Air Quality • Biological Resources • Noise and Vibration • Population and Housing • Traffic and Circulation • Utilities, Service Systems, and Water Supply No housing provided to meet critical regional and local needs.
Community Prepared Plan – Recology Variant	Added expansion of the existing Recology facility within the City of Brisbane to the Community Prepared Plan, replacing hotel and R&D uses north of Geneva Avenue and east of Tunnel Road. Expanded Recology facilities within Brisbane from 44.2 acres and 260,000 s.f. of building area to 65 acres and 1,011,000 s.f. as part of a proposed zero waste program. Total new development under this variant would be approximately 8.1 million s.f. with no residential development.	
Alternatives Analyzed in the Program EIR		
Renewable Energy Generation	170 acres of alternative energy uses, including solar farm, wind turbines, and rooftop PV solar panels 654,900 s.f. R&D on 59 acres 173,800 s.f. of retail/entertainment uses on 26 acres Open space/public uses	Although identified as the environmentally superior alternative, this alternative failed to meet most of the project's objectives and was determined to be infeasible due to specific economic viability, legal, social, technological, and other reasons (City of Brisbane 2018b).
Reduced Intensity Non-Residential	• General Retail: 500,000 s.f. • General Office: 800,000 s.f. • R&D: 2,000,000 s.f. • Industrial/Warehouse: 224,000 s.f. • Public/Civic (community center/community theater): 180,000 s.f. • Recology Expansion (total): 1,011,000 s.f. • Hotel: 520,000 s.f. (650 rooms) • Institutional (office): 80,000 s.f. • Renewable Energy Generation: 25 acres	Would not have avoided significant traffic, air quality, or GHG emissions impacts. No housing provided to meet critical regional and local needs. Additionally, GP-1-18, which had similar or lesser environmental impacts, provided Baylands-specific development and environmental protection General Plan policies and also assisted the City address regional and local housing needs.
Reduced Intensity Mixed-Use	2,400 dwelling units 3,750,780 s.f. of non-residential development 25-acre solar farm, small-scale wind and rooftop solar energy generation	Although having a similar overall development intensity, this alternative was rejected in favor of GP-1-18, which provided Baylands-specific development and environmental protection General Plan policies. In addition, this alternative would likely have resulted in a net annual fiscal deficit to the City's General Fund.

Alternative	Description	Reasons for Rejection
Alternatives Considered but Rejected during Scoping for the Current Specific Plan EIR		
Public Park or Commercial Recreation Use	Acquisition of the majority of the Baylands by the City or another public agency for public open space and park use. Bayshore Industrial Park, Golden State Lumber, Recology facilities along Tunnel Avenue, Kinder Morgan tank farm, Machinery & Equipment, Inc., and Mission Blue Nursery would remain.	Rejected from further consideration since no funding exists or would likely become available for acquisition, site remediation and final landfill closure, habitat restoration, infrastructure, recreational improvements, and ongoing operations and maintenance. Alternative would be inconsistent with the General Plan, not meet the overarching purpose of the project, and would not provide housing opportunities, requiring increased residential development outside of the Baylands to implement the City's adopted Housing Element.
Site Remediation in the Absence of Further Baylands Development	Site remediation within Operable Units OU-SM and OU-2, as well as final Title 27 landfill closure would be implemented, but no subsequent development within the Baylands would occur.	Unrealistic to assume that a landowner would undertake and bear the costs of site remediation and final landfill closure absent the ability to develop the Baylands to pay for those activities. Alternative would be inconsistent with the General Plan, not meet the overarching purpose of the project, and would not provide housing, requiring increased residential development outside of the Baylands to implement the City's adopted Housing Element.
Baylands Development Around an Operating 121-Acre High Speed Rail Light Maintenance Facility (LMF)	2,200 dwelling units, 6.5 million s.f. of commercial development, 500,000 s.f. of hotel use, and infrastructure and open space/open area developed around an operating 121-acre high-speed rail LMF as described as the preferred project in the High-Speed Rail Final EIR/EIS for the San Francisco to San Jose segment.[400]	Alternative would not reduce significant unavoidable impacts and would result in new and substantially more severe significant impacts than would the 2025 Specific Plan project, along with substantial incompatibilities between Baylands development and High-Speed Rail LMF construction and operations.[401] As the result of a September 2024 agreement between the City of Brisbane and the California High-Speed Rail Authority, development of a 121-acre LMF within the eastern portion of the Baylands is no longer reasonably foreseeable.[402] Baylands development around an operating 45-acre LMF as described in the City-Authority agreement is instead evaluated as an alternative to the proposed Specific Plan.

[400] California High Speed Rail Authority, *San Francisco to San Jose Section Final Environmental Impact Report/Environmental Impact Statement*, June 2022.

[401] The City of Brisbane's comments on the High-Speed Rail EIR/EIS can be found at https://www.brisbaneca.org/citycouncil/page/high-speed-rail-authority-publishes-final-eireis.

[402] The September 2024 agreement can be found at https://www.brisbaneca.org/city-attorney/page/california-high-speed-rail-authority-and-city-brisbane-reach-settlement.

8.3.2 ALTERNATIVE LOCATION FOR THE BAYLANDS SPECIFIC PLAN

CEQA encourages the evaluation of an alternative project site when a different location has the potential to reduce significant environmental impacts associated with a project's setting. CEQA Guidelines do not, however, require analysis of off-site alternatives in every EIR. Only feasible locations that would avoid or substantially lessen any of the significant effects of the project and meet most of the project objectives need to be considered in an EIR's alternatives analysis. In determining whether potential alternative sites are feasible, factors to be considered include whether the project proponent could reasonably acquire, control, or otherwise have access to the alternative site (CEQA Guidelines Section 15126.6(f)(1)).

Relevant criteria for an alternative site include supporting overarching project objectives (productive reuse of this brownfield site that eliminates ongoing ecological damage and ensures the safety of all who will use the Baylands) and implementing GP-1-18, meeting key geographic metrics for size and location in relation to transit, suitability for development (access to roads and utilities, available water supply), availability of property, and ability to reduce impacts of the Baylands Specific Plan. To be considered feasible, properties must meet necessary requirements and criteria, including the following:

- Comparable size to the Baylands' land area (450-550 acres);
- Have the ability to produce an equivalent amount of housing within the City of Brisbane to that which was approved in GP-1-18 (1,800 to 2,200 dwelling units) and thereby meet the City's share of regional housing need required for its 6th cycle Housing Element, including access to:
    - Regional transportation systems (freeway and roadway; rail and bus transit)
    - Needed utilities
- Potentially available for purchase; and
- Suitable for development with impacts no greater than those of proposed Baylands development.

Based on the above criteria, there are no suitable alternative sites for the Baylands that would meet the underlying purpose of the project, which is to provide for the productive reuse of a brownfield site in a manner that eliminates ongoing ecological damage and ensures the safety of all who will use the site. In addition, there are no sites within Brisbane that have sufficient area size and physical capability of achieving consistency with key General Plan provisions (1,800 to 2,200 dwelling units, up to 6.5 million s.f. of commercial development, and 500,000 s.f. of hotel use that would be revenue positive to the City and provide sufficient opportunities for development of housing for all economic segments of the community to meet the City's share of regional housing need required for implementation of the City's Housing Element. Accordingly, no off-site alternative has been carried forward for detailed analysis.

8.3.3 WATER SUPPLY ALTERNATIVES CONSIDERED BUT REJECTED

a. Oakdale Irrigation District Water Transfer

The potable water supply proposed for Baylands development and analyzed in the Program EIR was to be acquired from the Oakdale Irrigation District (OID) and delivered to the site via a water transfer agreement between the City and OID. Under the previous proposal, the City would acquire a supplemental water supply of up to 2,400 acre-feet per year (AFY) via a water transfer agreement with OID. The water would be transferred from OID to the City of Brisbane pursuant to water supply and conveyance agreements to be executed among OID, Modesto Irrigation District (MID), San Francisco Public Utilities Commission (SFPUC), and the City of Brisbane. Only existing diversion rights and existing facilities would be used, and no new facilities would be built.

The transfer of OID water supply was found to be problematic and was ultimately rejected for the following reasons:

- Uncertain timing for improvements to SFPUC's regional water system that would be required to move water supply to Brisbane and the Baylands;
- Environmental impacts associated with extraction of water from the Tuolumne River; and
- Opposition by MID to the proposed transfer agreement.

b. Contra Costa Water District

In December 2021, the applicant entered into a Memorandum of Understanding with the Contra Costa Water District (CCWD) to acquire water supply and reserve storage capacity at CCWD's Los Vaqueros Reservoir along with conveyance to the Specific Plan area. The CCWD-Baylands Development Inc. Memorandum of Understanding provided a framework for acquisition of up to 2,500 AFY and 10,000 acre-feet of storage in Los Vaqueros Reservoir, plus or minus 20 percent depending on final determination of need.[403]

Delivery of water from Los Vaqueros Reservoir to the SFPUC regional water system and the Baylands was proposed via the Transfer-Bethany Pipeline, Bethany Reservoir, South Bay Aqueduct, and San Antonio Reservoir. SFPUC would then deliver water from the San Antonio Reservoir to the Baylands via the same facilities now used to supply water to Brisbane.

[403] This proposed supply exceeded the 1,122 AFY of estimated potable annual water demand for the Baylands. The applicant stated that it would retain ownership of the excess water supply and the ability to sell that excess water supply to the City of Brisbane or to other entities outside of the City.

Water would be conveyed from Los Vaqueros Reservoir via an upgraded Transfer Facility pump station through the proposed Transfer-Bethany Pipeline to the existing California Aqueduct, which connects to the existing Bethany Reservoir. Bethany Reservoir is interconnected to the South Bay Aqueduct, an existing 49-mile aqueduct that is owned by the California Department of Water Resources (DWR). Existing turnout infrastructure connects the South Bay Aqueduct to San Antonio Reservoir and consists of a 30-inch-diameter valve and pipe, a meter, and an energy dissipater all contained in separate concrete vaults (the "Turnout"). This Turnout currently discharges water from the South Bay Aqueduct into an existing streambed that drains into the SFPUC's San Antonio Reservoir and the Sunol Valley Water Treatment Plant, both of which are part of the SFPUC's regional water system.

Comments regarding the potential impacts of this water supply provided by CCWD, the SFPUC, and the Zone 7 Water Agency (Zone 7 of the Alameda County Flood Control and Water Conservation District) in response to the revised Notice of Preparation distributed by the City of Brisbane in April 2023 raised substantial questions regarding the availability of this water supply and the feasibility of delivering it to the Baylands. In addition, on September 23, 2024, CCWD Board President Ernesto A. Avila issued a statement that CCWD would end its participation in the Los Vaqueros Reservoir Phase 2 Expansion Project, stating that "the facts show that this well-intended project is not viable." This alternative is therefore rejected from further consideration.

c. San Francisco Public Utilities Commission Retail Water Supply

In this alternative, proposed agreements with California Water Company (Cal Water) to transfer the Baylands, Sierra Point, and Beatty subareas from Brisbane's water service area to Cal Water's service area would not be approved, and Brisbane would remain the water service agency for the Baylands. Potable water supply to meet Baylands water demand would instead be acquired from the SFPUC from its retail portfolio in addition to Brisbane's Individual Supply Guarantee.

This alternative would rely on the same physical source of water as the proposed project since Cal Water purchases its supply based on an Individual Supply Guarantee from the SFPUC as does the City of Brisbane. This alternative would use existing turnouts from the SFPUC regional water system and require similar internal improvements as the Specific Plan. In this alternative, the Baylands recycled water facility would be downsized to provide recycled water for irrigation and other non-potable uses exclusively for Baylands development. No recycled water would be delivered to developments within South San Francisco.

This alternative was rejected from further consideration since this would not be a feasible long-term water solution. SFPUC's December 31, 2024, Water Supply Assessment for the 447 Battery and 530 Sansome Street Project indicated the following:

- With no implementation of the Bay-Delta Plan Amendment, system-wide shortages of regional water system supplies available to San Francisco would be adequate to meet demands in normal and single dry years. However, even though shortages would occur in the 4th and 5th years of a multi-year drought in 2045 projected levels of demand, adequate water would be available because "retail customers would reduce their demands by 5 percent as required by the Water Supply Agreement between SFPUC and its Wholesale Customers.
- Should the Healthy Rivers and Landscapes Agreement be accepted by the State Water Resources Control Board, systemwide shortage would occur although not to as great a degree as would occur under the Bay-Delta Plan Amendment. The Healthy Rivers and Landscapes Agreement would more closely align with SFPUC's goal of limiting water use reduction to no more than 20 percent on a system-wide basis in drought years.
- Implementation of the Bay-Delta Plan Amendment would cause significant shortfalls in single dry and multiple dry years through 2045, corresponding to water use reduction of approximately 15–36 percent over the next 20 years.

Giver this uncertainty, it is unlikely that the SFPUC would agree to sell water from its retail supply to supplement Brisbane's Individual Supply guarantee to serve Baylands development. This water supply alternative was therefore rejected from further consideration.

8.4 IDENTIFICATION AND EVALUATION OF BAYLANDS SPECIFIC PLAN ALTERNATIVES

Pursuant to CEQA Guidelines Section 15126.6(d), an EIR must evaluate the comparative merits of the alternatives identified in an EIR and contain sufficient information about each alternative to permit that evaluation. The significant effects of each alternative must be discussed, but in less detail than is required for the project's effects. However, the analysis must be conducted at a sufficient level of detail to provide the public, other public agencies, and City decision-makers with adequate information to allow an informed comparison of the impacts of the site development with those of the alternatives.

Implementation of the Remedial Action Plans for OU-SM and OU-2, described in Chapter 3, *Project Description*, of this EIR, is required prior to any future Baylands development, including

development of any of the alternatives (except the No Project-No Build Alternative) identified in this chapter. Alternatives evaluated in this chapter include:

- No Project Alternatives, which are analyzed in Section 8.4.1
    a. No Project-No Build
    b. No Project-General Plan Buildout
- Land Development Alternatives, which are summarized in **Table 8-5** and analyzed in Sections 8.4.3 and 8.4.4.
    - Proposed Density Alternatives (analyzed in Section 8.4.3)
        1. Proposed Density Development Around an Operating 45-Acre Light Maintenance Facility
        2. Proposed Density, Balanced Commercial Development
        3. Proposed Density, Lower Maximum Building Heights
    - Reduced Density Alternatives (analyzed in Section 8.4.4)
        4. Reduced Commercial Development
        5. Reduced Density Development Around an Operating 45-Acre Light Maintenance Facility
        6. Reduced Density, Balanced Commercial Development
        7. Reduced Density, Lower Maximum Building Heights

The following are provided for each of these alternatives:

- A description of the alternative's purpose;
- Analysis of the alternative's physical environmental effects including comparison to the impacts of the Baylands Specific Plan;
- Evaluation of the extent to the alternative would reduce of avoid the significant unavoidable impacts of the 2025 Specific Plan project and support the project's objectives; and
- Evaluation of the alternative's reasonableness and feasibility.

Section 8.5 provides a comparison of alternatives and identifies the environmentally superior alternative.

8.4.1 NO PROJECT ALTERNATIVES

a. No Project-No Build Alternative

Description and Purpose

The No Project-No Build Alternative assumes that the Baylands Specific Plan would not be approved and there would be no further development within the Baylands. No infrastructure improvements would be made, existing uses would continue but not expand, and any new uses within the Baylands would either occupy existing buildings or operate as interim or temporary uses. Since no future development would occur:

- Neither site remediation nor final Title 27 landfill closure would be undertaken;
- No site grading or new construction would be undertaken; and
- An expanded water supply for the Baylands would not be acquired.

The Geneva Avenue extension would not be part of Baylands development but could nevertheless be constructed by others as one of the regional transportation improvements identified in the Bi-County Transportation Study independent of any action taken by the City in relation to the Baylands Specific Plan. Since it would not be part of Baylands development under this alternative, the Geneva Avenue extension is not analyzed as part of the No Project-No Build Alternative.

The purpose of this alternative is to comply with CEQA Guidelines Section 15126.6(e) requirements for evaluation of a "no project" alternative.

CEQA Guidelines Section 15126.6(e) "No Project" Alternative

CEQA Guidelines Section 15126.6(e) requires evaluation of a no project alternative "to allow decision makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project."

For a land use or regulatory plan or policy, the "no project" alternative typically evaluates impacts associated with the existing plan or policy compared to the proposed project, commonly referred to as a "No Project-General Plan Buildout Alternative."

For a site-specific development project, the "no project" alternative typically compares the environmental effects of the property remaining in its existing state against environmental effects that would occur if the project were approved and constructed, commonly referred to as a "No Project-No Build Alternative."

Because the Baylands Specific Plan contains elements of both a land use/regulatory plan and a site-specific development, both a "No Project-No Build" and a "No Project-General Plan Buildout Alternative" are analyzed in this EIR.

Environmental Evaluation

Land Use and Planning Policies

The No Project-No Build Alternative does not provide for any future development within the Baylands. Existing industrial uses along Industrial Way and other existing uses within the Baylands would continue. As such, this alternative would fail to implement the City's General Plan, including GP-1-18 and Measure JJ. In the absence of an approved specific plan, it is unlikely that the Baylands landowner would

undertake physical site remediation and final Title 27 landfill closure since these actions are not required to maintain the site's land use status quo. The No Project-No Build Alternative would therefore be inconsistent with General Plan policies calling for site remediation, rehabilitation of historic buildings, and restoration and enhancement of habitats within the Baylands, as well as policies aimed at providing for the Geneva Avenue extension as part of revitalizing the site through development of a mixed-use community.

The No Project-No Build Alternative would be inconsistent with the City's adopted General Plan Land Use and Housing elements and fail to achieve the project's overarching purpose of providing opportunity for development of housing for all economic segments of the community.

The No Project-No Build Alternative would also be inconsistent with the General Plan by not providing for development of 6.5 million s.f. of commercial and 500,000 s.f. of hotel use. While existing habitat areas would be left in place, no habitat restoration or enhancement would be undertaken. By eliminating development of residential and commercial uses from the Baylands, this alternative would be inconsistent with the regional sustainable communities strategy, Plan Bay Area 2050, by preventing transit-oriented development adjacent to transit within a Priority Development Area, resulting increasing regional vehicle miles traveled (VMT), as well as mobile source GHG and air pollutant emissions.

Population and Housing

Because no new development would occur, no new housing development or employment opportunities would be provided within the Baylands, nor would any urban decay effects occur. In the absence of any land zoned for housing or residential development within the Baylands, the City of Brisbane would be required to identify and undertake General Plan and zoning amendments to permit development of sufficient new housing outside of the Baylands to meet its fair share of regional housing needs as described in the Regional Housing Needs Allocation (RHNA) and the City's adopted General Plan Housing Element, which would generate environmental impacts outside of the Baylands equal to or greater than those of the Specific Plan.

As shown in **Table 8-2**, in the absence of a Specific Plan providing for development of 1,800 to 2,200 dwelling units, Brisbane's adopted 6th Cycle Housing Element would need to be amended to identify opportunities for the development 1,189 additional dwelling units outside of the Specific Plan area for the 2023-2031 Housing Element Cycle.

Table 8-2: Effect of the No Project-No Build Alternative on Brisbane's Ability to Provide Housing for All Economic Segments of the Community

Household Income Group	RHNA Objective for Brisbane	Baylands Housing Capacity	Housing Capacity Outside of the Baylands	Capacity Shortfall without Baylands Housing
Very Low	317	145	172	(145)
Low	183	82	101	(82)
Moderate	303	287	16	(287)
Above Moderate	785	1,286	131	(654)
TOTAL	**1,588**	**1,800**	**420**	**(1,168)**

SOURCE: City of Brisbane, 2023.

Thus, the No Project-No Build Alternative would necessitate construction of housing in locations that are not now planned for such development, thereby causing unplanned growth. Because such housing within Brisbane outside of the Baylands would not have direct access to the Bayshore Caltrain station equivalent to that of the Baylands, transit use would be reduced and impacts resulting from vehicular travel, including VMT, air quality, GHG emissions, and energy, would be increased.

Aesthetic and Visual Resources

Because there would be no new development, no visual impacts would occur within the Baylands. This alternative would not affect scenic vistas and resources, the visual character of the Baylands, or ambient light and glare. As such, Specific Plan impacts would be substantially greater than those of this alternative.

Biological Resources

Because no development would occur, the No Project-No Build Alternative would not result in the removal of any biological resources within the Baylands. However, none of the habitat restoration or enhancement proposed as part of the Baylands Specific Plan would occur.

Cultural and Tribal Cultural Resources

Because the historic Roundhouse building would not be rehabilitated or adaptively reused, in the absence of public funding, it would continue to deteriorate until it could no longer be restored. The resulting loss of the historic Roundhouse would be a significant and unavoidable impact.

Because the No Project-No Build Alternative includes no development-related ground disturbance, there would be no potential for impacts on archaeological resources. No Tribal cultural resources are present within the Baylands, and no impacts would occur.

Transportation

Because no new development would occur within the Baylands, the total amount of VMT generated within the Baylands would remain unchanged. Although no new traffic would be generated within the Baylands, new development occurring in surrounding jurisdictions would cause traffic conditions within and surrounding the Baylands to continue to deteriorate due to regional through traffic as commuters seek alternatives, including Bayshore Boulevard, to an increasingly congested US Highway 101 (US 101) freeway. In addition, in the absence of Baylands development, VMT would increase within the nine-county Bay Area region to a greater degree than it would with development of the Baylands Specific Plan due to the site's transit orientation, resulting in a greater (although still less than significant) impact compared to the Specific Plan.

Air Quality and Greenhouse Gas Emissions

Because no new development would occur within the Baylands, the No Project-No Build Alternative would not generate any increase in air pollutant or GHG emissions and the impacts described in Section 4.9, *Air Quality*, and Section 4.10, *Greenhouse Gas Emissions*, would not occur. However, as demonstrated in Section 4.8, *Transportation*, regional VMT would be greater without Baylands development than with its development due to the site's transit orientation. Thus, the No Project-No Build Alternative would increase the Specific Plan's regional mobile source GHG and air pollutant emissions impact.

Energy Resources

Because no new development would occur within the Baylands, no new energy-consuming use would be introduced to the Baylands. However, because the Specific Plan proposes 100 percent use of renewable energy, on-site consumption of fossil fuels would be greater for the No Project-No Build Alternative than it would be for the Specific Plan, although mobile source energy consumption for Baylands use would be substantially less for the No Project-No Build Alternative than it would be for the Specific Plan.

However, because regional VMT would be greater without Baylands development than with development of the Specific Plan, regional mobile source fuel consumption would be greater for the No Project-No Build Alternative than it would be for the Specific Plan.

Noise and Vibration

Because the No Project-No Build Alternative does not provide for new Baylands development, it would eliminate the noise and vibration impacts described in Section 4.12, *Noise and Vibration*, that would result from Specific Plan development. Thus, the No Project-No Build Alternative would have less noise impact than the proposed project.

Hazards and Hazardous Materials

Because no development would occur within the Baylands, it is likely that none of the remedial actions or Title 27 final landfill closure required for future development would be undertaken. Maintenance of existing methane and leachate control systems for the former landfill within the Baylands would, however, continue. None of the Specific Plan's impacts described in Section 4.13, *Hazards and Hazardous Materials*, would occur.

Hydrology and Water Quality

Because no development would occur, existing drainage patterns, impervious surface area, and peak runoff volumes would remain unchanged. Thus, Specific Plan impacts related to water quality degradation, alteration of drainage patterns, stormwater runoff, and flooding addressed in Section 4.14, *Hydrology and Water Quality*, would not occur. However, in the absence of sea level rise adaptation measures that would be undertaken by Specific Plan development, the existing Lagoon Road would become subject to flooding from tidal action and eventually become permanently inundated. Flooding along portions of the existing Sierra Point Parkway could also become a regular occurrence. Thus, significant impacts would result from the No Project-No Build Alternative that would otherwise be mitigated by the proposed Specific Plan.

Geology, Soils, and Seismicity

Because no ground disturbance or construction of new structures subject to geological, soils, or seismic hazards would occur as the result of new development within the Baylands, none of the Specific Plan's impacts would result. However, because the No Project-No Build Alternative would not require seismic retrofit of the seismically unsound historic Roundhouse, the structure would become increasingly vulnerable to seismic damage over time.

Utilities, Service Systems, and Water Supply

Because no future development would occur, the No Project-No Build Alternative would not generate any new or increased demands for utilities and services systems, nor any increase in water consumption for which expanded water supply would be necessary. As a result, none of the Specific Plan's impacts addressed in Section 4.16, *Utilities, Service Systems, and Water Supply*, would occur.

Public Services and Facilities

Because future Baylands development would not occur, the No Project-No Build Alternative would not generate any new or increased demands for public services. As a result, none of the Specific Plan's impacts addressed in Section 4.17, *Public Services and Facilities*, would occur.

Recreation Resources

The No Project-No Build Alternative would not result in any Baylands population growth that would generate a demand for recreational facilities. Neither would any ground disturbance or construction be undertaken for any new or expanded recreational facilities within the Baylands. Thus, none of the Specific Plan's impacts addressed in Section 4.18, *Parks, Open Space/Open Areas, and Recreational Resources*, would occur.

Wildland Fire

The No Project-No Build Alternative would not result in any development or population/ employment growth that could increase wildland fire hazards. No impact would result.

Evaluation of the No Project-No Build Alternative in Relation to Project Objectives

The environmental impacts that would result from the Baylands Specific Plan would largely be avoided by eliminating proposed future development and leaving the Baylands in its existing condition. However, the No Project-No Build Alternative would not achieve the underlying purpose of the project, namely, to provide for the productive reuse of a brownfield site in a manner that eliminates ongoing ecological damage and ensures the safety of all who will use the Baylands site, nor would this alternative achieve project objectives. In addition, this alternative would prevent implementation of the Brisbane General Plan and result in new significant impacts in relation to:

- Not remediating contaminated soils or groundwater within Baylands Operable Units OU-SM and OU-2, as well as not providing required Title 27 final landfill closure of the former Brisbane Landfill.
- Preventing implementation of the adopted Housing Element, which would require the City to identify and rezone locations outside of the Baylands to accommodate an additional 1,164 dwelling units outside of the Baylands through 2031 as defined in the City's RHNA (see **Table 4.4-1**), thereby creating additional environmental impacts west of Bayshore Boulevard.
- Ongoing deterioration and ultimate loss of the historic Roundhouse building.
- By leaving Lagoon Road in its current location, projected sea level rise over time would cause daily and ultimately permanent inundation of the roadway, limiting access to the Sierra Point Subarea and requiring public expenditure for roadway realignment.

Table 8-3: Evaluation of the No Project-No Build Alternative in Relation to Project Objectives

Project Objectives	Extent to which the No Project-No Build Alternative Would Achieve Objectives
The underlying purpose of the Baylands Specific Plan and the development it permits is to:	
Provide for the productive reuse of this brownfield site in a manner that eliminates ongoing ecological damage and ensures the safety of all who will use the Baylands.	This alternative does not provide for reuse of the former railyard or former landfill. In the absence of any development within the Baylands, future site remediation or Title 27 Final Landfill Closure would be doubtful.
Project Objectives for the Baylands are to:	
• Preserve and enhance the site's natural resources and historic features within a system of permanent open space that: o Restores, and enhances wetlands and natural habitats within the Baylands; o Promotes visual connectivity between the Baylands, San Bruno Mountain, and San Francisco Bay; o Adapts to climate change and sea level rise; and o Provides a range of recreational opportunities and open space experiences for Baylands residents and workers, as well as for the larger Brisbane community.	While existing Baylands habitat areas would be preserved, they would not be restored or enhanced, nor would recreational opportunities be provided within the Baylands. Deterioration of the historic Roundhouse would continue until its restoration and adaptive reuse would no longer be possible.
• Implement the City's Housing Element by providing a mix of housing types, sizes, and densities that contributes to local and regional housing needs for all economic segments of the community, as well as for families and individuals of all ages and physical abilities.	No land would be zoned for housing within the Baylands, and the City would be required to identify and rezone locations outside of the Baylands to meet local and regional housing needs for all economic segments of the community.
• Enhance Brisbane's economic vitality by ensuring that Baylands development will be revenue positive to the City.	The existing balance of minimal Baylands costs and revenue would continue.
• Establish the Baylands as a leading model of sustainable development consistent with the principles of the City's Sustainability Framework for the Baylands (Integral Group 2015).	This alternative would not provide any new sustainability features or address any of the Sustainability Framework principles.
• Attract office-based employment to the Baylands that provides a broad range of high-paying jobs as well as training and advancement opportunities for the community's young adults.	This alternative would provide for the continuation of existing uses within the Baylands but would not attract new office-based employment that provides a broad range of high-paying jobs as well as training and advancement opportunities for the community's young adults.
• Enable residents, workers, and visitors to be less dependent on cars.	By eliminating future development within the Baylands, there would be no on-site residents, workers, or visitors.

b. No Project-General Plan Buildout Alternative

Description

The No Project-General Plan Buildout Alternative assumes that the Baylands Specific Plan as it is currently proposed would not be approved and that future development of the Baylands would occur without any amendments to the Brisbane General Plan. Thus, development of the

No Project-General Plan Buildout Alternative would differ from the proposed Specific Plan in the following ways:

- The No Project-General Plan Buildout Alternative would encompass only the area that is currently within the Baylands Subarea (see existing General Plan in **Figure 3-3**).
- Sierra Point Parkway would not be extended north from its current terminus at the US 101 freeway southbound off-ramps.
- Lagoon Road would remain in its current alignment and not be realigned to the north to terminate at the US 101 freeway southbound off-ramps.
- Green Shared Streets would not be added to the roadway types identified in the General Plan Circulation Element and would therefore be replaced by standard local streets.

The purpose of this alternative is to comply with CEQA Guidelines Section 15126.6(e) requirements for evaluation of a "no project" alternative.

Environmental Evaluation

Land Use and Planning Policies

The No Project-General Plan Buildout Alternative provides for development of the Specific Plan land use program (1,800-2,200 dwelling units, up to 6.5 million s.f. of commercial development, and 500,000 s.f. of hotel use) based on the existing General Plan boundaries and roadway plan for the Baylands. As such, this alternative would implement and be consistent with the City's General Plan.

The No Project-General Plan Buildout Alternative would also be consistent with the regional sustainable communities strategy, Plan Bay Area 2050, by providing for transit-oriented development within a Priority Development Area. Impacts would therefore be the same (less than significant) as for the Specific Plan.

Population and Housing

The No Project-General Plan Buildout Alternative would provide for development of the same types and intensity of residential, commercial, and hotel development within the existing Baylands Subarea as the Specific Plan, as well as the same amount of commercial development within the existing Beatty Subarea as is currently permitted by the General Plan. While this would result in a greater total amount of development than is proposed in the Specific Plan, this alternative would have similar impacts related to new housing development and employment opportunities, as well as urban decay effects as the Specific Plan.

Aesthetic and Visual Resources

This alternative would build out the same amount of residential, commercial, and hotel development as the Specific Plan within the existing Baylands Subarea, resulting in roughly equivalent visual impacts to those of the Specific Plan, while differing in the following ways:

- Sustainable infrastructure proposed in the Specific Plan for the area east of the Caltrain right-of-way would be shifted from the north side of Geneva Avenue to other locations. As a result, the office uses within the Campus District would be slightly taller and have a slightly greater development intensity than for the Specific Plan.
- Because Sierra Point Parkway would not be extended north from its current terminus at the US 101 southbound freeway ramps, office uses within the Campus District would take primary access from Geneva Avenue and Tunnel Avenue. As a result, office buildings would have a greater setback from the freeway than would occur with Specific Plan development, offsetting the marginal increase in scenic vista impacts that would result from taller buildings within the Campus District east of the Caltrain.

Biological Resources

The No Project-General Plan Buildout Alternative would require removal of the same sensitive biological resources for site grading and development within the Baylands as the Specific Plan. This alternative would also provide the same habitat restoration and enhancement along Visitacion Creek and on Icehouse Hill as would the Baylands Specific Plan. Because Lagoon Road would not be realigned to the north, the habitat restoration and enhancement proposed in the Specific Plan for Lagoon Park would not be provided. As a result, biological resources impacts would be greater than those of the Specific Plan.

Cultural Resources and Tribal Cultural Resources

The historic Roundhouse building would be rehabilitated and adaptively reused as provided for in the Specific Plan. Because the No Project-General Plan Buildout Alternative would include development-related ground disturbance to the same depths as the Specific Plan, the potential for impacts on archaeological resources would be the same. No Tribal cultural resources are present within the Baylands.

Transportation

The No Project-General Plan Buildout Alternative includes the same 2,200 dwelling units, 6.5 million s.f. of commercial, 500,000 s.f. of hotel use, and open space/open area program as the Specific Plan. However, not extending Sierra Point Parkway to Geneva Avenue and leaving Lagoon Road in its current location would increase VMT compared to the Specific Plan. As sea level rises over time, the existing Lagoon Road would become inundated and impassable on a daily and eventually a permanent basis, forcing traffic to divert onto longer routes to and from

the US 101 freeway. Emergency response to the Sierra Point area would also be adversely affected as access to and from that area would be limited to the US 101 freeway when Lagoon Road was inundated. Thus, transportation impacts would be substantially greater than those of the Specific Plan.

Since Baylands development would not make any contribution to the need or funding for the Geneva Avenue extension and related Candlestick freeway interchange improvements at US Highway 101, a funding gap would result. Thus, construction of the Geneva Avenue extension and freeway interchange improvements would be dependent on other agencies and development projects to increase their funding.[404]

Air Quality and Greenhouse Gas Emissions

Because VMT would be greater than for the Specific Plan, the No Project-General Plan Buildout Alternative would have greater mobile source air pollutant and GHG emissions, which would exacerbate the significant unavoidable impacts of the Specific Plan. Stationary source emissions associated with Baylands on-site non-vehicular activities would have similar air pollutant and GHG emissions as the Specific Plan.

Energy Resources

No Project-General Plan Buildout Alternative buildings would consume and generate similar amounts of electricity as the Specific Plan. However, due to increased VMT, vehicular energy consumption would be greater than for the Specific Plan.

Noise and Vibration

Because the No Project-General Plan Buildout Alternative would concentrate traffic due to the lack of the Sierra Point Parkway extension and limited availability of Lagoon Road, vehicular noise along alternative travel routes would be greater (although not noticeably so) than for the Specific Plan, resulting in similar significant unavoidable impacts. Vibration impacts would be the same as those of the Specific Plan.

Hazards and Hazardous Materials

The No Project-General Plan Buildout Alternative would have similar on-site impacts because it would have same general development program as the Specific Plan.

[404] Geneva Avenue extension and interchange improvements are indicated in the San Francisco Bay Area Regional Transportation Plan, and Bi-County Transportation Study. These improvements are also assumed in the Candlestick Point-Hunters Point Shipyard Phase II Development Plan Project EIR.

Hydrology and Water Quality

As previously noted, the present alignment of Lagoon Road would be subject to daily inundation and eventually become permanently inundated due to projected sea level rise through 2100. Other portions of the Baylands would be provided with similar protection from flooding and the effects of sea level rise as would be provided by the Specific Plan. In addition, the same measures to be implemented by Specific Plan development to minimize water quality impacts and to prevent sedimentation and erosion would be implemented with this alternative.

Geology, Soils, and Seismicity

Construction of new structures would be subject to the same geological, soils, and seismic hazards as would Specific Plan development. The seismically unsound historic Roundhouse structure would undergo the same seismic retrofit as the Specific Plan. Thus, impacts of the No Project-General Plan Buildout Alternative would be the same as for the Specific Plan.

Utilities, Service Systems, and Water Supply

The No Project-General Plan Buildout Alternative would generate the same demands for utilities and services systems and increased water consumption as the Specific Plan. As a result, impacts would be the same as for the Specific Plan.

Public Services and Facilities

The No Project-General Plan Buildout Alternative would generate the same demands for new or increased public services as the Specific Plan, requiring the same public facilities improvements, and resulting in the same impacts as the Specific Plan.

Recreation Resources

The No Project-General Plan Buildout Alternative would generate the same Baylands population growth and demand for recreational facilities as the Specific Plan. As a result, the same public facilities improvements would be required and the same impacts as the Specific Plan would result.

Wildland Fire

The No Project-General Plan Buildout Alternative would result in similar development and population/employment growth as the Specific Plan and would result in similar wildland fire hazard impacts.

Evaluation of the No Project-General Plan Buildout Alternative in Relation to Project Objectives

The No Project-General Plan Buildout Alternative would generally achieve the underlying purpose of the project objectives, although to a lesser degree than would the Specific Plan without substantially reducing the Specific Plan's significant impacts (**Table 8-4**). In addition, by not requiring Baylands development to realign Lagoon Road, projected sea level rise over time would cause daily and ultimately permanent inundation of the roadway, limiting access to the Sierra Point Subarea and requiring public expenditure for roadway realignment.

8.4.2 DESCRIPTION AND SUMMARY COMPARISON OF PROPOSED AND REDUCED DENSITY LAND DEVELOPMENT ALTERNATIVES

The land development alternatives described and analyzed in this section are each based on the assumption that the Specific Plan described in Chapter 3 and analyzed in Chapter 4 would be modified. As shown in **Table 8-5**, each of the seven land development alternatives to the Specific Plan were developed based on different ways of distributing development around the Baylands. Alternatives 1–3 analyze the effects of redistributing Specific Plan development (2,200 dwelling units, 6.5 million s.f. of commercial, 500,000 s.f. of hotel use) around the Baylands, while Alternatives 4–7 analyze the effects of both redistributing and reducing the amount of residential and commercial development that would be permitted within the Baylands.

Table 8-6 provides a summary comparison of the impacts of each of the alternatives analyzed above to those of the Baylands Specific Plan.

Table 8-4: Evaluation of the No Project-General Plan Buildout in Relation to Project Objectives

Project Objectives	Extent to Which the No Project-General Plan Buildout Alternative Would Achieve Objectives
The underlying purpose of the Baylands Specific Plan and the development it permits is to:	
Provide for the productive reuse of this brownfield site in a manner that eliminates ongoing ecological damage and ensures the safety of all who will use the Baylands.	The No Project-General Plan Buildout Alternative would provide the same development program as the Specific Plan and generally meet the Specific Plan's underlying purpose, although to a lesser degree than would the Specific Plan.
Project Objectives for the Baylands are to:	
• Preserve and enhance the site's natural resources and historic features within a system of permanent open space that: o Restores, and enhances wetlands and natural habitats within the Baylands; o Promotes visual connectivity between the Baylands, San Bruno Mountain, and San Francisco Bay; o Adapts to climate change and sea level rise; and o Provides a range of recreational opportunities and open space experiences for Baylands residents and workers, as well as for the larger Brisbane community.	By not requiring Baylands development to realign Lagoon Road, projected sea level rise would cause daily, and eventually permanent, inundation of the roadway and eliminate Lagoon Park. As a consequence of not requiring Baylands development to realign Lagoon Road to the north, public expenditure would ultimately be required to realign the roadway. Baylands housing within the northwestern portion of the Baylands would implement the City's adopted Housing Element to the same degree as the Specific Plan. The No Project-General Plan Buildout Alternative would provide all of the sustainability features of the Specific Plan, albeit with a small habitat conservation area. This alternative would also provide for the same type and extent of employment-generating development as the Specific Plan.
• Implement the City's Housing Element by providing a mix of housing types, sizes, and densities that contributes to local and regional housing needs for all economic segments of the community, as well as for families and individuals of all ages and physical abilities.	Because the same residential development program would be developed, the same opportunities for development of housing for all economic segments of the community would be provided within the adopted Housing Element's planning period (2023-2031) as would the Specific Plan.
• Enhance Brisbane's economic vitality by ensuring that Baylands development will be revenue positive to the City.	This alternative would provide the same development program as would the Specific Plan and generate a similar positive revenue stream to the City as would the Specific Plan.
• Establish the Baylands as a leading model of sustainable development consistent with the principles of the City's Sustainability Framework for the Baylands (Integral Group 2015).	This alternative would provide the same sustainability features as the Specific Plan except that Lagoon Road would not be designed for resiliency to sea level rise and a smaller habitat area would be restored and enhanced due to the loss of Lagoon Park.
• Attract office-based employment to the Baylands that provides a broad range of high-paying jobs as well as training and advancement opportunities for the community's young adults.	This alternative would provide the same employment-generating commercial development as the Specific Plan and generate a similar range of employment opportunities.
• Enable residents, workers, and visitors to be less dependent on cars.	This alternative would provide the same features designed to encourage use of transit, bicycle, and pedestrian travel as the Specific Plan.

Table 8-5: Alternatives Analyzed in Addition to No Project Alternatives

	Proposed Density Alternatives			Reduced Density Alternatives			
	1. Development around an Operating 45-Acre Light Maintenance Facility (LMF)	**2. Balanced Commercial**	**3. Reduced Maximum Building Heights**	**4. Reduced Commercial Development**	**5. Development around an Operating 45-Acre Light Maintenance Facility (LMF)**	**6. Balanced Commercial**	**7. Reduced Maximum Building Heights**
Housing	2,200 dwelling units west of Caltrain, north of Main Street. (same as Specific Plan)	2,200 dwelling units west of Caltrain, north of Main Street. (same as Specific Plan)	2,200 dwelling units west of Caltrain, north of Main Street. (same as Specific Plan)	2,200 dwelling units west of Caltrain, north of Main Street. (same as Specific Plan)	1,800 dwelling units west of Caltrain, north of Main Street. (same as Specific Plan)	1,800 dwelling units west of Caltrain, north of Main Street. (same as Specific Plan)	1,800 dwelling units west of Caltrain, north of Main Street. (same as Specific Plan)
Commercial Development (west of Caltrain)	4.0 million s.f. commercial office 500,000 s.f. hotel (same as Specific Plan)	3.6 million s.f. commercial office 500,000 s.f. hotel (same locations as Specific Plan)	4.0 million s.f. commercial office 500,000 s.f. hotel (same as Specific Plan)	2.8 million s.f. commercial office 350,000 s.f. hotel (same locations as Specific Plan)	2.8 million s.f. commercial office 350,000 s.f. hotel. (concentrated along Geneva Ave. and Sierra Point Pkwy.)	2.6 million s.f. commercial office 350,000 s.f. hotel (same locations as Specific Plan)	2.8 million s.f. commercial office 350,000 s.f. hotel (concentrated along Geneva Ave. and Sierra Point Pkwy.)
Commercial Development (east of Caltrain)	2.5 million s.f. commercial office (same as Specific Plan)	2.9 million s.f. commercial office (same locations as Specific Plan)	2.5 million s.f. commercial office (same as Specific Plan)	1.7 million s.f. commercial office (concentrated on Geneva Ave and Sierra Point Pkwy)	1.7 million s.f. commercial office (concentrated on Geneva Ave and Sierra Point Pkwy)	1.9 million s.f. commercial office (same locations as Specific Plan)	1.7 million s.f. of commercial office (same as Specific Plan)
Maximum Building Heights	Same as Specific Plan (permits 20+ story buildings)	12-story max. for commercial office 8-story max. for housing	12-story max. for commercial office 8-story max. for housing	12-story max. for commercial office 8-story max. for housing	Same as Specific Plan (permits 20+ story buildings)	12-story max. for commercial office 8-story max. for housing	12-story max. for commercial office 8-story max. for housing
High-Speed Rail Light Maintenance Facility (LMF)	Relocates development outside of an operating 45-acre LMF footprint.	Could relocate development outside of an operating 45-acre LMF footprint.	Does not include high-speed rail LMF.	Could relocate development outside of an operating 45-acre LMF footprint.	Relocates development outside of an operating 45-acre LMF footprint.	Could relocate development outside of an operating 45-acre LMF footprint.	Does not include high-speed rail LMF.

	Proposed Density Alternatives			Reduced Density Alternatives			
	1. Development around an Operating 45-Acre Light Maintenance Facility (LMF)	**2. Balanced Commercial**	**3. Reduced Maximum Building Heights**	**4. Reduced Commercial Development**	**5. Development around an Operating 45-Acre Light Maintenance Facility (LMF)**	**6. Balanced Commercial**	**7. Reduced Maximum Building Heights**
Roadways west of Caltrain	Same as Specific Plan.	Same as Specific Plan.	Same as Specific Plan.	Same as Specific Plan.	Same as Specific Plan.	Same as Specific Plan.	Same as Specific Plan.
Roadways east of Caltrain	Realigns Tunnel Ave. to the east. Otherwise, same as Specific Plan.	Same as Specific Plan. Could include realignment of Tunnel Ave. to the east to allow for a 45-acre high speed rail LMF.	Same as Specific Plan.	Same as Specific Plan. Could include realignment of Tunnel Ave. to the east to allow for a 45-acre high speed rail LMF.	Realigns Tunnel Ave. to the east. Otherwise, same as Specific Plan.	Same as Specific Plan. Could include realignment of Tunnel Avenue to the east to allow for a 45-acre high speed rail LMF.	Same as Specific Plan.
Infrastructure west of Caltrain	Same as Specific Plan.	Same as Specific Plan.	Same as Specific Plan.	Same as Specific Plan.	Same as Specific Plan.	Same as Specific Plan.	Same as Specific Plan.
Infrastructure east of Caltrain	Shifts water recycling and water storage tank to the east of Tunnel Ave.	Same as Specific Plan unless water recycling and water storage tank are shifted east for LMF.	Same as Specific Plan.	Same as Specific Plan unless water recycling and water storage tank are shifted east for LMF.	Shifts water recycling and water storage tank to the east of Tunnel Ave.	Same as Specific Plan unless water recycling and water storage tank are shifted east for LMF.	Same as Specific Plan.
Parks/Habitat Restoration west of Caltrain	Same as Specific Plan.	Same as Specific Plan.	Same as Specific Plan.	Same as Specific Plan.	Same as Specific Plan.	Same as Specific Plan.	Same as Specific Plan.
Parks/Habitat Restoration east of Caltrain	< 3-acre reduction in Visitacion Creek to allow for 45-acre LMF.	Same as Specific Plan unless Tunnel Avenue is realigned to allow for 45-acre LMF.	Same as Specific Plan.	Same as Specific Plan unless Tunnel Avenue is realigned to allow for 45-acre LMF.	< 3-acre reduction in Visitacion Creek to allow for 45-acre LMF.	Same as Specific Plan unless Tunnel Avenue is realigned to allow for 45-acre LMF.	Same as Specific Plan.

	Proposed Density Alternatives			Reduced Density Alternatives			
	1. Development around an Operating 45-Acre Light Maintenance Facility (LMF)	**2. Balanced Commercial**	**3. Reduced Maximum Building Heights**	**4. Reduced Commercial Development**	**5. Development around an Operating 45-Acre Light Maintenance Facility (LMF)**	**6. Balanced Commercial**	**7. Reduced Maximum Building Heights**
Renewable Energy Generation; Energy Conservation	Same generation as proposed Specific Plan. Development to meet CALGreen Tier 2 standards.	Same as proposed Specific Plan. Development to meet CALGreen Tier 2 standards.	Same as proposed Specific Plan. Development to meet CALGreen Tier 2 standards.	Increased generation from expanded solar farm. Development to meet CALGreen Tier 2 standards.	Increased generation from expanded solar farm. Development to meet CALGreen Tier 2 standards.	Same as proposed Specific Plan. Development to meet CALGreen Tier 2 standards.	Same as proposed Specific Plan. Development to meet CALGreen Tier 2 standards.
Sustainable Infrastructure	Same as Specific Plan except: • Utility-scale battery storage would be shifted to the north side of Geneva Ave. east of Caltrain. • Water recycling facility would be shifted to the east side of Tunnel Ave.	Same as Specific Plan unless Tunnel Ave. is realigned, in which case: • Utility-scale battery storage would be shifted to the north side of Geneva Ave. east of Caltrain. • Water recycling facility would be shifted to the east side of Tunnel Ave.	Same as proposed Specific Plan.	Same as Specific Plan unless Tunnel Ave. is realigned, in which case: • Utility-scale battery storage would be shifted to the north side of Geneva Ave. east of Caltrain. • Water recycling facility would be shifted to the east side of Tunnel Ave.	Same as Specific Plan except: • Utility-scale battery storage would be shifted to the north side of Geneva Ave. east of Caltrain. • Water recycling facility would be shifted to the east side of Tunnel Ave.	Same as Specific Plan unless Tunnel Ave. is realigned, in which case: • Utility-scale battery storage would be shifted to the north side of Geneva Ave. east of Caltrain. • Water recycling facility would be shifted to the east side of Tunnel Ave.	Same as proposed Specific Plan.

Table 8-6: Summary Comparison of Impacts That Would Result from the Specific Plan and Alternatives

	Comparison of Alternatives Impacts to Specific Plan Impacts									
		No Project Alternatives		Proposed Density Alternatives			Reduced Density Alternatives			
	Specific Plan	No Build	General Plan Buildout	1. Development Around an Operating 45-Acre LMF	2. Balanced Commercial	3. Reduced Maximum Building Height	4. Reduced Commercial Development	5. Development Around an Operating 45-Acre LMF	6. Balanced Commercial	7. Reduced Maximum Building Height
Land Use and Planning Policies										
Physical Division of Existing Community										
(construction)	LTS w/Mit.	Reduced (No Impact)	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar
(operations)	LTS	Reduced (No Impact)	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar
Consistency w/ Relevant Plans	LTS w/Mit.	Increased (does not implement General Plan)	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar
Socioeconomic Effects										
Inducement of Unplanned Growth	LTS	Increased (requires new housing outside Baylands)	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar
Displacement of Housing and Businesses	LTS	Reduced (No Impact)	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar
Housing for All Economic Segments of the Community	LTS	Increased (requires new housing outside Baylands)	Similar	Similar	Similar	Similar	Similar	Increased	Increased	Increased

	Comparison of Alternatives Impacts to Specific Plan Impacts									
		No Project Alternatives		Proposed Density Alternatives			Reduced Density Alternatives			
	Specific Plan	No Build	General Plan Buildout	1. Development Around an Operating 45-Acre LMF	2. Balanced Commercial	3. Reduced Maximum Building Height	4. Reduced Commercial Development	5. Development Around an Operating 45-Acre LMF	6. Balanced Commercial	7. Reduced Maximum Building Height
Urban Decay	LTS	Reduced (No Impact)	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar
Aesthetic and Visual Resources										
Public Views of Scenic Resources	LTS w/Mit.	Reduced (No Impact)	Similar	Similar	Similar	Reduced (due to lower building heights)	Similar	Reduced (due to reduced density and building height)	Reduced (due to reduced density and building height)	Reduced (due to reduced density and building height)
Impacts on Scenic Resources	LTS w/Mit.	Reduced (No Impact)	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar
Consistency with Visual Quality Policies	LTS w/Mit.	Reduced (No Impact)	Similar	Similar	Similar	Similar	Reduced (due to reduced building heights and commercial square footage)	Similar	Similar	Similar
Nighttime Lighting	LTS w/Mit.	Reduced (No Impact)	Similar	Similar	Similar	Similar	Similar	Reduced (due to less lighted area)	Similar	Similar
Daytime Glare	LTS w/Mit.	Reduced (No Impact)	Similar	Similar	Similar	Similar	Reduced (due to less glare-producing area)	Reduced (due to less glare-producing area)	Reduced (due to less glare-producing area)	Reduced (due to less glare-producing area)

	Comparison of Alternatives Impacts to Specific Plan Impacts									
		No Project Alternatives		Proposed Density Alternatives			Reduced Density Alternatives			
	Specific Plan	No Build	General Plan Buildout	1. Development Around an Operating 45-Acre LMF	2. Balanced Commercial	3. Reduced Maximum Building Height	4. Reduced Commercial Development	5. Development Around an Operating 45-Acre LMF	6. Balanced Commercial	7. Reduced Maximum Building Height
Biological Resources										
Candidate, Sensitive, and Special-Status Plants, Animals, and Habitats	LTS w/Mit.	Reduced (No Impact)	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar
Wetlands and Non-Wetland Waters Acreage, Functions, and Values	LTS w/Mit.	Reduced (No Impact)	Increased (due to lack of habitat restoration at Lagoon Park)	Similar	Similar	Similar	Similar	Similar	Similar	Similar
Movement of Fish and Wildlife Species	LTS w/Mit.	Reduced (No Impact)	Similar	Similar	Similar	Similar	Reduced (due to reduced building glass area)	Reduced (due to reduced building glass area)	Reduced (due to reduced building glass area)	Reduced (due to reduced building glass area)
Consistency with Brisbane Municipal Code Chapter 12.12, Private Tree Regulations	LTS	Reduced (No Impact)	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar
Consistency with San Bruno Mountain Habitat Conservation Plan	LTS w/Mit.	Reduced (No Impact)	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar

	Comparison of Alternatives Impacts to Specific Plan Impacts									
		No Project Alternatives		Proposed Density Alternatives			Reduced Density Alternatives			
	Specific Plan	No Build	General Plan Buildout	1. Development Around an Operating 45-Acre LMF	2. Balanced Commercial	3. Reduced Maximum Building Height	4. Reduced Commercial Development	5. Development Around an Operating 45-Acre LMF	6. Balanced Commercial	7. Reduced Maximum Building Height
Cultural and Tribal Cultural Resources										
Historic Resources (Roundhouse and Machinery & Equipment Buildings)	LTS w/Mit.	**Increased (due to Roundhouse deterioration) SU**	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar
Archaeological Resources	LTS w/Mit.	Reduced (No Impact)	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar
Tribal Cultural Resources	No Impact	Similar (No Impact)	Similar (No Impact)	Similar (No Impact)	Similar (No Impact)	Similar (No Impact)	Similar (No Impact)	Similar (No Impact)	Similar (No Impact)	Similar (No Impact)
Disturbance of Human Remains	LTS	Reduced (No Impact)	Similar	Similar	Similar	Similar	Similar	Reduced (due to less excavation)	Reduced (due to less excavation)	Similar
Transportation										
Vehicle Miles Traveled	LTS	Increased (due to development outside Baylands)	Increased (due to differences in travel routes)	Similar	Increased (due to less transit use by Baylands employees)	Increased (due to less transit use by Baylands employees)	Increased (due to less transit, bicycle, and pedestrian travel)	Increased (due to less transit use)	Increased (due to less transit use)	Increased (due to less transit use)
Transit, Bicycle, and Pedestrian Travel	LTS w/Mit.	Reduced (No Impact)	Similar	Similar	Increased (due to less transit use by Baylands employees)	Increased (due to less transit use by Baylands employees)	Increased (due to less transit, bicycle, and pedestrian travel)	Similar	Increased (due to less transit use)	Increased (due to less transit use)

	Comparison of Alternatives Impacts to Specific Plan Impacts									
		No Project Alternatives		Proposed Density Alternatives			Reduced Density Alternatives			
	Specific Plan	**No Build**	**General Plan Buildout**	**1. Development Around an Operating 45-Acre LMF**	**2. Balanced Commercial**	**3. Reduced Maximum Building Height**	**4. Reduced Commercial Development**	**5. Development Around an Operating 45-Acre LMF**	**6. Balanced Commercial**	**7. Reduced Maximum Building Height**
Hazards to Vehicles, Bicyclists, and Pedestrians	LTS w/Mit.	Reduced (No Impact)	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar
Emergency Access	LTS w/Mit.	Reduced (No Impact)	Increased (due to differences in travel routes)	Similar	Similar	Similar	Similar	Similar	Similar	Similar
Air Quality										
Emissions of Criteria Air Pollutants	**SU**	Increased (due to development outside Baylands)	**Increased (due to increased travel) SU**	**Similar SU**	**Increased (due to less transit use by Baylands employees) SU**	**Similar SU**	**Increased (due to increased vehicular travel by Baylands employees) SU**	**Similar SU**	**Similar SU**	**Similar SU**
Exposure of Sensitive Receptors to Substantial Pollutant Concentrations	LTS w/Mit.	Reduced (No Impact)	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar
Odors	LTS w/Mit.	Reduced (No Impact)	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar
Consistency with 2017 Regional Clean Air Plan	LTS	Reduced (No Impact)	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar

	Comparison of Alternatives Impacts to Specific Plan Impacts									
		No Project Alternatives		Proposed Density Alternatives			Reduced Density Alternatives			
	Specific Plan	**No Build**	**General Plan Buildout**	**1. Development Around an Operating 45-Acre LMF**	**2. Balanced Commercial**	**3. Reduced Maximum Building Height**	**4. Reduced Commercial Development**	**5. Development Around an Operating 45-Acre LMF**	**6. Balanced Commercial**	**7. Reduced Maximum Building Height**
Greenhouse Gas Emissions										
Specific Plan Area Greenhouse Gas Emissions	**SU**	**Increased (due to travel outside Baylands) SU**	**Increased (due to increased travel) SU**	**Similar SU**	**Increased (due to less transit use by Baylands employees) SU**	**Similar SU**	**Increased (due to increased vehicular travel by Baylands employees) SU**	**Reduced (due to reduced emissions) SU**	**Reduced (due to reduced emissions) SU**	**Reduced (due to reduced emissions) SU**
Effect on Regional Greenhouse Gas Emissions	LTS	Reduced (No Impact)	**Increased (due to increased travel)**	Similar	Similar	Similar	**Increased (due to less transit use by Baylands employees)**	**Increased (due to less transit use by Baylands employees)**	**Increased (due to less transit use by Baylands employees)**	**Increased (due to less transit use by Baylands employees)**
Consistency with Greenhouse Gas Reduction Plans, Policies, Standards, and Regulations	LTS w/Mit.	Reduced (No Impact)	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar
Energy Resources										
Wasteful, Inefficient, or Unnecessary Use of Energy	LTS	Increased (due to development outside Baylands)	Increased (due to increased travel)	Similar	Similar	Similar	Similar	Reduced (due to reduced demand and increased solar energy generation)	Reduced (due to reduced demand)	Reduced (due to reduced demand)

	Comparison of Alternatives Impacts to Specific Plan Impacts									
		No Project Alternatives		Proposed Density Alternatives			Reduced Density Alternatives			
	Specific Plan	No Build	General Plan Buildout	1. Development Around an Operating 45-Acre LMF	2. Balanced Commercial	3. Reduced Maximum Building Height	4. Reduced Commercial Development	5. Development Around an Operating 45-Acre LMF	6. Balanced Commercial	7. Reduced Maximum Building Height
Consistency with Energy Reduction Plans, Policies, and Programs	LTS w/Mit.	Reduced (No Impact)	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar
Noise and Vibration										
Temporary Ambient Noise Increase during Construction	**SU**	Reduced (No Impact)	**Similar SU**	**Similar SU**	**Similar SU**	**Increased (due to more pile driving) SU**	**Reduced (due to less pile driving) SU**	**Reduced (due to less pile driving and less development near sensitive receptors) SU**	**Reduced (due to less development near sensitive receptors) SU**	**Reduced (due to less pile driving) SU**
Permanent Ambient Noise Increase from Stationary Sources	**SU**	Reduced (No Impact)	**Similar SU**	**Similar SU**	**Similar SU**	**Similar SU**	**Similar SU**	**Similar SU**	**Similar SU**	**Similar SU**
Traffic Noise Increase	**SU**	Reduced (No Impact)	**Increased (due to differences in travel routes) SU**	**Similar SU**	**Similar SU**	**Similar SU**	**Similar SU**	**Reduced (due to less traffic) SU**	**Reduced (due to less traffic) SU**	**Reduced (due to less traffic) SU**

	Comparison of Alternatives Impacts to Specific Plan Impacts									
		No Project Alternatives		Proposed Density Alternatives			Reduced Density Alternatives			
	Specific Plan	No Build	General Plan Buildout	1. Development Around an Operating 45-Acre LMF	2. Balanced Commercial	3. Reduced Maximum Building Height	4. Reduced Commercial Development	5. Development Around an Operating 45-Acre LMF	6. Balanced Commercial	7. Reduced Maximum Building Height
Exposure of People to Railroad, Freeway, and Airport Noise	LTS w/Mit.	Reduced (No Impact)	Similar	Reduced (due to LMF separating offices from rail line)	Similar	Reduced (due to less development near rail line)	Reduced (due to less development near rail line)	Reduced (due to fewer sensitive receptors near high-noise areas)	Reduced (due to fewer sensitive receptors near high-noise areas)	Reduced (due to less development near rail line and freeway)
Increase in Groundborne Vibrations	LTS w/Mit.	Reduced (No Impact)	Similar	Similar	Similar	Similar	Reduced (due to less pile driving)	Reduced (due to less pile driving and less development near rail line)	Reduced (due to less pile driving overall and near sensitive receptors)	Reduced (due to less pile driving)
Exposure of People to High Vibration Levels	LTS w/Mit.	Reduced (No Impact)	Similar	Reduced (due to LMF separating offices from rail line)	Similar	Reduced (due to less development subject to existing vibration)	Reduced (due to less development near rail line)	Similar	Similar	Reduced (due to less development near rail line and freeway)
Hazards and Hazardous Materials										
Risks from Transport, Use, Disposal, and Management of Hazardous Materials	LTS w/Mit.	Reduced (No Impact)	Similar	Similar	Similar	Similar	Reduced (due to reduced commercial development intensity)	Reduced (due to reduced development intensity)	Reduced (due to reduced development intensity)	Reduced (due to reduced development intensity)

	Comparison of Alternatives Impacts to Specific Plan Impacts									
		No Project Alternatives		Proposed Density Alternatives			Reduced Density Alternatives			
	Specific Plan	No Build	General Plan Buildout	1. Development Around an Operating 45-Acre LMF	2. Balanced Commercial	3. Reduced Maximum Building Height	4. Reduced Commercial Development	5. Development Around an Operating 45-Acre LMF	6. Balanced Commercial	7. Reduced Maximum Building Height
Health Hazards for Schools due to Release of Hazardous Materials or Proximity to Hazardous Conditions	LTS w/Mit.	Reduced (No Impact)	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar
Development on Listed Hazardous Materials Sites	LTS	Reduced (No Impact)	Similar	Similar	Similar	Similar	Similar	Reduced (due to less development on landfill site)	Reduced (due to less development on landfill site)	Similar
Safety Hazard or Excessive Noise from Aircraft Operations	LTS	Reduced (No Impact)	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar
Emergency Preparedness and Response	LTS	Reduced (No Impact)	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar
Hydrology and Water Quality										
Protection of Water Quality	LTS w/Mit.	Reduced (No Impact)	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar
Groundwater Recharge and Sustainable Management	LTS	Reduced (No Impact)	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar

	Comparison of Alternatives Impacts to Specific Plan Impacts									
		No Project Alternatives		Proposed Density Alternatives			Reduced Density Alternatives			
	Specific Plan	No Build	General Plan Buildout	1. Development Around an Operating 45-Acre LMF	2. Balanced Commercial	3. Reduced Maximum Building Height	4. Reduced Commercial Development	5. Development Around an Operating 45-Acre LMF	6. Balanced Commercial	7. Reduced Maximum Building Height
Flood Hazards	LTS w/Mit.	Increased (due to lack of sea level rise adaptation)	Similar	Similar	Similar	Similar	Similar	Similar	Reduced (due to reduced runoff)	Similar
Release of Pollutants due to Flood, Tsunami, Sea Level Rise and Emergent Groundwater, or Seiche	LTS	Increased (due to lack of sea level rise adaptation)	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar
Geology, Soils, and Seismicity										
Fault Rupture	No Impact	Similar (No Impact)	Similar (No Impact)	Similar (No Impact)	Similar (No Impact)	Similar (No Impact)	Similar (No Impact)	Similar (No Impact)	Similar (No Impact)	Similar (No Impact)
Seismic Ground Shaking	LTS	Reduced (No Impact)	Similar	Similar	Similar	Similar	Reduced (due to fewer people subject to risk)	Reduced (due to fewer people subject to risk)	Reduced (due to fewer people subject to risk)	Reduced (due to fewer people subject to risk)
Liquefaction and Seismic-Related Ground Failure	LTS	Reduced (No Impact)	Similar	Similar	Similar	Similar	Reduced (due to fewer commercial buildings)	Similar	Similar	Similar
Slope Instability	LTS w/Mit.	Reduced (No Impact)	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar
Expansive Soils and Soil Corrosivity	LTS	Reduced (No Impact)	Similar	Similar	Similar	Similar	Reduced (due to less building area)	Reduced (due to less building area)	Reduced (due to fewer buildings)	Similar

	Comparison of Alternatives Impacts to Specific Plan Impacts									
		No Project Alternatives		Proposed Density Alternatives			Reduced Density Alternatives			
	Specific Plan	No Build	General Plan Buildout	1. Development Around an Operating 45-Acre LMF	2. Balanced Commercial	3. Reduced Maximum Building Height	4. Reduced Commercial Development	5. Development Around an Operating 45-Acre LMF	6. Balanced Commercial	7. Reduced Maximum Building Height
Paleontological Resources	LTS w/Mit.	Reduced (No Impact)	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar
Use of Septic Tanks or Alternative Wastewater Disposal Systems	No Impact	Similar (No Impact)	Similar (No Impact)	Similar (No Impact)	Similar (No Impact)	Similar (No Impact)	Similar (No Impact)	Similar (No Impact)	Similar (No Impact)	Similar (No Impact)
Utilities, Service Systems, and Water Quality										
Water Supply	LTS	Reduced (No Impact)	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar
Construction, Relocation, or Improvement of Utilities	LTS	Reduced (No Impact)	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar
Consistency with Solid Waste Management Policies	LTS	Reduced (No Impact)	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar
Landfill Capacity	LTS	Reduced (No Impact)	Similar	Similar	Similar	Similar	Reduced (due to less solid waste)	Reduced (due to less solid waste)	Reduced (due to less solid waste)	Reduced (due to less solid waste)
Public Services and Facilities										
New or Altered Public Facilities	LTS w/Mit.	Reduced (No Impact)	Similar	Similar	Similar	Similar	Reduced (due to reduced demand for services)	Reduced (due to reduced demand for services)	Similar	Similar

	Comparison of Alternatives Impacts to Specific Plan Impacts									
		No Project Alternatives		Proposed Density Alternatives			Reduced Density Alternatives			
	Specific Plan	No Build	General Plan Buildout	1. Development Around an Operating 45-Acre LMF	2. Balanced Commercial	3. Reduced Maximum Building Height	4. Reduced Commercial Development	5. Development Around an Operating 45-Acre LMF	6. Balanced Commercial	7. Reduced Maximum Building Height
Recreation Resources										
Physical Deterioration of a Park or Recreational Facility	LTS w/Mit.	Reduced (No Impact)	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar
Physical Deterioration of Candlestick Point Windsurfing Resources	LTS	Reduced (No Impact)	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Reduced (due to reduced building heights)
Wildland Fire										
Wildland Fire Potential	LTS	Reduced (No Impact)	Similar	Similar	Similar	Similar	Reduced (due to fewer people)	Reduced (due to fewer people)	Reduced (due to fewer people)	Reduced (due to fewer people)
Conclusions										
Achieve Project Objectives?	Yes	**No**	Yes but to a lesser degree	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Overall Comparison to Project Impacts		Reduced	Increased	Similar	Similar	Reduced	Reduced	Reduced	Reduced	Reduced

NOTE: **Bold text** indicates significant unavoidable impact.

LTS = less than significant

LTS w/Mit. = less than significant with mitigation incorporated

SU = significant unavoidable

8.4.3 EVALUATION OF PROPOSED DENSITY LAND DEVELOPMENT ALTERNATIVES

Alternatives 1–3 each propose the same 2,200 dwelling units, 6.5 million s.f. of commercial, 500,000 s.f. of hotel use, and open space/open area program as the Specific Plan, while redistributing Specific Plan land uses by:

(1) Relocating development around and outside of an operating 45-acre California High-Speed Rail Light Maintenance Facility (LMF);

(2) Achieving a more balanced distribution of commercial development on either side of the Caltrain right-of-way; and

(3) Reducing the maximum allowing building heights for residential and commercial development within the Baylands.

a. Alternative 1: Proposed Density Development Around an Operating 45-Acre LMF

The purpose of this alternative is to address the impacts of developing Specific Plan land uses around and outside of a 45-acre operating LMF footprint should the California High-Speed Rail Authority construct and operate such a facility within the Baylands consistent with the provisions of the September 2024 agreement between the City and High-Speed Rail Authority.[405] The analyses below do not address impacts of constructing and operating the LMF facility itself.

Land Use and Planning Policies

Physical Division of an Existing Community

Because the southbound rail flyover to the LMF described in the High-Speed Rail EIR/EIS would not be required for a 45-acre LMF,[406] the Geneva Avenue bridge would be constructed with the same profile as was analyzed for Specific Plan development. This alternative would thus provide the same configuration of development, recreational and habitat areas, and the same roadway and non-motorized transportation system as the Specific Plan within the western portion of the site. Within the eastern portion of the site, Tunnel Avenue would be realigned slightly to the east, incorporating approximately 15 acres from Low Density Commercial,

[405] The September 2024 agreement can be found at https://www.brisbaneca.org/city-attorney/page/california-high-speed-rail-authority-and-city-brisbane-reach-settlement.

[406] The preferred alternative analyzed by the California High Speed Rail Authority in its *Final EIR/EIS for the California High-Speed Rail System, San Francisco to San Jose Section* (June 2022) included a flyover to provide access for southbound trains to a then-proposed 121-acre LMF along the east of the Caltrain right-of-way within the Baylands. This flyover would have required raising the proposed profile of the Geneva Avenue bridge by approximately 30 feet and providing a 1,000- to 1,200-foot-long bridge.

Visitacion Creek, and Sustainable Infrastructure (solar field) areas within a 45-acre LMF between the Caltrain rail line and Tunnel Avenue.

Proposed Density development around an operating 45-acre LMF would include the same construction projects affecting area roadways as the Specific Plan, be subject to the same requirements and mitigation measures, and would therefore result in the same construction impacts as the Specific Plan. This alternative would provide the same connectivity within the Specific Plan, to the Caltrain Bayshore station, and the US 101 freeway as the Specific Plan. Proposed Density development around an operating 45-acre LMF would therefore have the same (less than significant) impacts in relation to dividing an existing community as would the proposed Specific Plan.

Consistency with Local and Regional Plans

Proposed Density development around an operating 45-acre LMF would be consistent with the General Plan's development intensity standards for the Baylands. Development of 2,200 dwelling units is at the top end of the range for housing specified in the General Plan and the same as that of the Baylands Specific Plan. Development of the same 6.5 million s.f. of commercial office space and an additional 500,000 s.f. of hotel use as the Specific Plan would also be consistent with the General Plan. Consistency with General Plan policies as well as with other local and regional plans would be the same as for the Specific Plan.

Population and Housing

Induce Substantial Unplanned Growth

Proposed Density development around an operating 45-acre LMF provides for the same number of dwelling units (2,200) and would result in the same resident population as the Baylands Specific Plan (4,095) at buildout, which represents planned growth. In addition, this alternative provides for the same amount of commercial office space (6.5 million s.f.) and hotel use (500,000 s.f.) within the Baylands as the Specific Plan. Baylands employment would therefore be the same as for the Specific Plan and also represent planned growth, not substantial unplanned growth. Impacts would be the same as the Specific Plan (less than significant).

Displacement of Existing Housing or Businesses

Because this alternative would have the same footprint as the Specific Plan within the western portion of the Baylands, Proposed Density development around an operating 45-acre LMF would displace the same 231,400 s.f. of existing industrial businesses along Industrial Way, resulting in the same less than significant impact.

Because this alternative would maintain the Specific Plan's development footprint within the western portion of the site and nearly the same footprint within the eastern portion of the

Baylands, there would be room for locating the sustainable infrastructure features proposed in the Specific Plan between the Caltrain right-of-way and Tunnel Avenue to another suitable location east of Tunnel Avenue, either to the east side of Tunnel Avenue (water recycling facility) or to the north of Geneva Avenue (utility-scale battery facility). This alternative would place the Golden State Lumber laydown yard within the 45-acre LMF, which would result in the same less than significant physical environmental impact and the same economic impact as the Specific Plan.

Housing for all Economic Segments of the Community

The zoning to implement this alternative would provide for the same opportunity for development of housing as the Specific Plan (2,200 units) and would be capable of meeting the City's quantified housing objectives for all segments of the community for the 2023-2031 housing element cycle. Impacts would therefore be the same as for the 2025 Specific Plan.

Urban Decay

Because Proposed Density development around an operating 45-acre LMF would provide the same amount of residential, retail, and office development as the Specific Plan, it would generate the same demand for retail uses and have the same less than significant physical urban decay impacts as the Specific Plan.

Aesthetic and Visual Resources

Public Views of Identified Scenic Resources (San Bruno Mountain and Adjacent Ridgelines, San Francisco Bay, and the Brisbane Lagoon)

Proposed Density development around an operating 45-acre LMF includes the full 2.5 million s.f. of commercial office space proposed by the Specific Plan east of the Caltrain line within an approximately 15-acre smaller area. This would be achieved by increasing the footprint or height of buildings, or both. Because approximately 67 acres of development area (over 80 percent) would remain within the Campus East District, it is unlikely the maximum building heights proposed in the Specific Plan would need to be increased to such a degree that public views of San Francisco Bay would be adversely affected to a greater degree than for the 2025 Specific Plan project. Thus, impacts on scenic resources resulting from development around a 45-acre LMF would be similar to those of the Specific Plan.

Impacts to Scenic Resources

Proposed Density development around an operating 45-acre LMF would provide for the same preservation and improvements of existing scenic resources within the Baylands as the Specific Plan. Icehouse Hill and the edges of Brisbane Lagoon would be improved in the same manner as would the Specific Plan, including restoration of wetland and habitat areas; however,

because a slightly smaller portion of Visitacion Creek corridor would be affected by the 2025 Specific Plan project, a smaller area would be restored and enhanced. This alternative would also extend the San Francisco Bay Trail through the site. Proposed Density development around an operating 45-acre LMF would have a similar less than significant impact as the Specific Plan.

Consistency with Visual Quality-Related Policies and Programs

By relocating the water recycling facility to the east of the realigned Tunnel Avenue, Proposed Density development around an operating 45-acre LMF would require construction of an estimated 3,800 linear feet of retaining wall ranging in height from 9 to 15 feet along the commercial parcel boundaries east of the LMF feet along with 500 feet of 8-foot-high retaining wall along Geneva Avenue. This retaining wall would be subject to the same design guidelines and be required to comply with the design principles reflected in the findings that are required to be made by the Planning Commission for approval of a design permit. Impacts would thus be similar to those of the Specific Plan.

Nighttime Lighting

Because approximately 67 acres of development area (over 80 percent) would remain within the Campus East District, this alternative would generate nighttime lighting over smaller, though still broad area that is currently largely dark at night compared to the Specific Plan. Nighttime lighting of outdoor open space and park areas would remain the same as that for the Specific Plan. Proposed Density development around an operating 45-acre LMF would be subject to the same nighttime lighting standards and EIR mitigation measures as the Specific Plan and would result in similar less than significant impacts as the Specific Plan.

Glare

Proposed Density development around an operating 45-acre LMF would generate a similar amount of glare-producing reflective building materials on building roofs and thematic elements, while retaining a similar façade area and amount of above-ground infrastructure as the Specific Plan. Shifting above-ground infrastructure (e.g., utility-scale battery storage that may include highly reflective stainless-steel surfaces from Tunnel Avenue to the more heavily traveled Geneva Avenue corridor could increase impacts on motorists.

This alternative would result in a similar significant glare impact and be required to comply with the same mitigation and performance standards as the Specific Plan. A similar less than significant impact with mitigation incorporated as the Specific Plan would result.

Biological Resources

Candidate, Sensitive, and Special-Status Plants, Animals, and Habitats

Proposed Density development around an operating 45-acre LMF would have a similar development footprint and require the same movement of soil from the eastern to the western portion of the Baylands to achieve final grades as would the Specific Plan. Thus, the same impacts to existing species and habitats would occur as the Specific Plan. This alternative would provide the same habitat restoration and enhancement on Icehouse Hill and the north shore of the Lagoon, with a smaller restoration and enhancement area along Visitacion Creek as the Specific Plan. This alternative would be subject to the same mitigation measures and result in similar less than significant impacts with mitigation incorporated as the Specific Plan.

Wetlands and Non-Wetland Waters Acreage, Functions, and Values

Proposed Density development around an operating 45-acre LMF would have a similar development footprint and cause a similar loss of wetlands and non-wetland waters during site grading and construction as the Specific Plan.

Site grading pursuant to a City grading permit to achieve final grades within the western portion of the site would cause a similar, through slightly smaller, loss of wetland and non-wetland waters within Visitacion Creek as the Specific Plan since a small portion of the creek would be located within the 45-acre LMF and would not be disturbed as part of Baylands development.[407] In addition, construction of Lagoon Park and realignment of Lagoon Road would result in the loss of existing wetlands and non-wetland waters along the north shore of the lagoon. Proposed Density development around an operating 45-acre LMF would, however, restore and enhance the portion of Visitacion Creek outside of the 45-acre LMF and the entirety of Lagoon Park as outlined in the Specific Plan. This alternative would be subject to the same mitigation requirements as the Specific Plan and would therefore result in similar less than significant with mitigation incorporated impacts.

Movement of Fish and Wildlife Species

Trails, recreational improvements, and habitat restoration and enhancement on Icehouse Hill would be the same as with the Specific Plan. Because a similar amount of building glass area would result as the Specific Plan, bird strike impacts would be similar, and implementation of the same mitigation measures would be required. Thus, impacts would be similar to those of the Specific Plan.

[407] The small portion of Visitacion Creek that would not be disturbed by Baylands development would be removed and placed in an underground channel beneath the 45-acre LMF as part of its construction. The cumulative effect of Baylands and LMF development on loss of habitat would be the same as for the Specific Plan. LMF construction would, however, require off-site mitigation of biological resources impacts.

Consistency with Brisbane Municipal Code Chapter 12.12, Private Tree Regulations

Proposed Density development around an operating 45-acre LMF would be required to comply with the requirements of Brisbane Municipal Code Chapter 12.12 in relation to tree replacement. As a result, impacts would be the same as those of the Specific Plan.

Consistency with the San Bruno Mountain Habitat Conservation Plan

Because this alternative would provide the same improvements within Icehouse Hill as the Specific Plan, impacts would be the same.

Cultural Resources and Tribal Cultural Resources

Roundhouse and Machinery & Equipment Buildings

Because the development footprint and areas subject to site grading and other ground-disturbing activities would be unchanged from the Specific Plan within the western portion of the site, the Roundhouse would be restored for adaptive reuse as is proposed in the Specific Plan and subject to the same EIR mitigation measures. In addition, development surrounding the Roundhouse and Machinery & Equipment building would be consistent with their historic character. Thus, impacts would be the same as those for the Specific Plan.

Archaeological Resources

Because site grading and other ground-disturbing activities would remain the same and development would be subject to the same mitigation measures, impacts would be the same as those of the Specific Plan.

Tribal Cultural Resources

Because no Tribal cultural resources have been identified within the Baylands, no impacts would result.

Disturbance of Known or Unknown Human Remains

Because site grading and other ground-disturbing activities would remain the same and development would be subject to the same mitigation measures, impacts would be the same as those of the Specific Plan.

Transportation

Vehicle Miles Traveled

Proposed Density development around an operating 45-acre LMF would retain a similar number of Baylands residents and employees within walking distance of the Caltrain Bayshore station. This alternative would provide a similar comprehensive system of bicycle and pedestrian facilities, including completion of the Bay Trail through the eastern portion of the Baylands and provision bicycle and pedestrian connections to the Bay Trail, Visitacion Creek, and Lagoon Park. The result would be no change in the use of transit, bicycle, and pedestrian modes of transportation or change in per capita employee VMT compared to the Specific Plan.

Transit, Bicycle, and Pedestrian Travel Modes

Proposed Density development around an operating 45-acre LMF would provide a similar comprehensive system of bicycle and pedestrian facilities, including completion of the Bay Trail through the eastern portion of the Baylands and provision bicycle and pedestrian connections to the Bay Trail, Visitacion Creek, and Lagoon Park. The result would be no change in the use of transit, bicycle, and pedestrian modes of transportation.

Hazards to Vehicles, Bicyclists, and Pedestrians

All roadways, as well as bicycle and pedestrian facilities, and trails within the Baylands would be constructed to City standards. Thus, impacts would be similar to those of the Specific Plan.

Emergency Access

Proposed Density development around an operating 45-acre LMF would be provided with more than one point of access, facilitating emergency response, similar to the Specific Plan. Because the extension of Geneva Avenue over the Caltrain right-of-way to the US 101 freeway and extension of Sierra Point Parkway would be the same as for the Specific Plan, emergency response from the proposed new fire station within the northeastern portion of the Baylands would be similar to the Specific Plan. In addition, because all roadways would be constructed to City standards and this alternative would provide emergency access during flooding events consistent with EIR mitigation requirements, impacts would be similar to the Specific Plan.

Air Quality

Consistency with the 2017 Regional Clean Air Plan

Proposed Density development around an operating 45-acre LMF would retain the same amount and intensity of residential and commercial development in proximity to transit and Baylands shuttle stops while making little difference, if any, east of Caltrain. In addition, this

alternative would include all of the same sustainability features, be subject to the same mitigation measures, and be equally consistent with the 2017 Clean Air Plan as the 2025 Specific Plan project.

Increased Emissions of Non-Attainment Criteria Air Pollutants

Proposed Density development around an operating 45-acre LMF would retain the same amount and intensity of residential and commercial development in proximity to transit and Baylands shuttle stops while making little difference, if any, east of Caltrain. In addition, the amount of grading required for this alternative would be similar to that required for the Specific Plan. Thus, the significant unavoidable construction impact associated with site grading for Proposed Density development around an operating 45-acre LMF would be similar to the Specific Plan.

Exposure of Sensitive Receptors to Substantial Pollutant Concentrations

Because site grading would be similar for Proposed Density development around an operating 45-acre LMF as for the Specific Plan, exposure of off-site receptors to pollutant concentrations resulting from grading activities would be similar to the Specific Plan. Development would be subject to the same mitigation measures and result in a similar less than significant impact with mitigation incorporated as the Specific Plan.

Odors

The potential for odor generation during site grading would be the same as that of the Specific Plan. However, because Proposed Density development around an operating 45-acre LMF would relocate the water recycling facility to the east of the realigned Tunnel Avenue, it would be further downwind from residential receptors. While the water recycling facility would be closer upwind from campus office uses than for Specific Plan development, the facility would be subject to the same mitigation measures to reduce odor emissions and would therefore have a similar impact as would Specific Plan development.

Greenhouse Gas Emissions

Specific Plan Area Greenhouse Gas (GHG) Emissions

Proposed Density development around an operating 45-acre LMF would result in the same amount of development with similar proximity to transit as the Specific Plan, provide a comprehensive system of bicycle and pedestrian facilities throughout the site, and complete the Bay Trail through the Baylands. The result would be similar use of transit, bicycle, and pedestrian modes of transportation, per capita VMT, and GHG emissions as the Specific Plan.

Effect on Regional GHG Emissions

Because Proposed Density Development around an operating 45-acre LMF would have the same amount of development with similar use of transit, bicycle, and pedestrian modes of transportation, per capita VMT, and GHG emissions as the Specific Plan, similar reductions in regional VMT and mobile source GHG emissions as the Specific Plan would result.

Consistency with GHG Reduction Plans, Policies, Performance Standards, and Regulations

This alternative would implement the same GHG reduction features and mitigation measures as the Specific Plan and would therefore be equally consistent with applicable GHG reduction plans, policies, performance standards, and regulations.

Energy Resources

Wasteful, Inefficient, or Unnecessary Use of Energy

Proposed Density development around an operating 45-acre LMF would result in the same amount of development with similar proximity to transit, provide a comprehensive system of bicycle and pedestrian facilities throughout the site, and result in similar transportation-related energy use as the Specific Plan. This alternative would generate and store a similar amount of renewable energy as the Specific Plan. On-site buildings would meet Tier 2 CALGreen Standards. Thus, impacts would be similar to the less than significant impacts of the Specific Plan.

Consistency with Applicable Energy Reduction Programs, Plans, Ordinances, and Policies

Because Proposed Density development around an operating 45-acre LMF would generate, store, and consume a similar amount of renewable energy on-site, as well as consume a similar amount of transportation-related energy, the impacts would be consistent with applicable energy reduction programs, plans, ordinances, and policies to a similar degree as the Specific Plan.

Noise and Vibration

Temporary Increase in Ambient Noise

The extent of site grading required for Proposed Density development around an operating 45-acre LMF would be similar to the significant unavoidable impacts of the Specific Plan, resulting in a similar need for pile foundations and pile driving. Similar construction noise impacts would therefore result.

Traffic Noise Increase

Proposed Density development around an operating 45-acre LMF would generate a similar amount of traffic as the Specific Plan. Traffic noise impacts would thus be similar to those of the Specific Plan (significant and unavoidable).

Permanent Increase in Ambient Noise

Proposed Density development around an operating 45-acre LMF would generate noise from the same stationary sources and be subject to the same mitigation measures as the Specific Plan. All development within the Baylands would be required to meet the same performance standards and comply with City noise ordinance requirements. Impacts of this alternative would, therefore, be the same as for the Specific Plan (significant and unavoidable).

Exacerbate Land Use/Noise Incompatibilities by Placing People in High Noise Areas

This alternative would place a similar type and amount of development along the west side of the Caltrain rail line and would thus experience similar land use/noise incompatibilities. Office development within the Campus East District would be separated from the Caltrain rail line by the 45-acre LMF, which would operate primarily at night when office workers would not be present. As a result, impacts would be less than those of the Specific Plan.

Vibration

The extent of site grading required for Proposed Density development around an operating 45-acre LMF would be similar to that of the Specific Plan, resulting in a similar need for pile foundations and pile driving. Similar construction vibration impacts would therefore result. Development of this alternative would generate operational vibration from the same stationary sources as the Specific Plan and result in the same impacts as the Specific Plan.

Exacerbation of Human Annoyance or Hazards by Placing Buildings in High Groundborne Vibration Areas

This alternative would place a similar type and amount of development along the west side of the Caltrain rail line and would thus experience similar human annoyance from railroad-generated vibration. Office development within the Campus East District would be separated from the Caltrain rail line by the 45-acre LMF, which would operate primarily at night when office workers would not be present. As a result, impacts would be less than those of the Specific Plan.

Hazards and Hazardous Materials

Risks Involved in Transport, Use, Disposal, and Management of Hazardous Materials

Demolition of older buildings potentially containing asbestos or lead-based paints would be the same for Proposed Density development around an operating 45-acre LMF as for the Specific Plan. In addition, because the types and intensity of uses for this alternative would be unchanged from the Specific Plan, the potential for a release of hazardous materials due to the transport, use, disposal, or management of hazardous materials, whether resulting from routine activities or an accident, would be similar to the Specific Plan. Development of this alternative would be subject to the same extensive set of regulations designed to protect the public and environment from such a release of hazardous materials. Thus, impacts would be similar to those of the Specific Plan.

Create a Health Hazard for an Existing or Planned School Site Due to Release of Hazardous Materials or Proximity of Hazardous Conditions

The location of a school site within the Baylands in relation to locations of hazardous materials sites and emitters would be no different than for the Specific Plan. Thus, the impacts of this alternative would be the same as for the Specific Plan.

Development on a Property That Is Included on a List of Hazardous Materials Sites

The majority of the Baylands site, including the former Brisbane Landfill, OU-SM, and OU-2, is included on databases listing hazardous materials pursuant to Government Code Section 65962.5. Within the western portion of the Baylands, development would occur within operating units OU-SM and OU-2 following site remediation pursuant to the regulatory authority of the San Francisco Bay Regional Water Quality Control Board (RWQCB) and Department of Toxic Substances Control (DTSC).

Proposed Density development around an operating 45-acre LMF would occur within the same footprint within OU-SM and OU-2, and a nearly identical footprint within the former Brisbane Landfill, all of which are included on databases listing hazardous materials pursuant to Government Code Section 65962.5. Development of this alternative would be subject to the same General Plan policies and EIR mitigation measures as the Specific Plan and would thus have a similar less than significant impact as the Specific Plan.

Create an Airport Safety Hazard or Expose People to Excessive Noise of Aircraft Operations

Since none of the Specific Plan area is subject to safety hazards or excessive noise from aircraft operations, this alternative would have the same impacts as the Specific Plan.

Emergency Preparedness and Response

The same amount of development proposed for the Specific Plan would occur in the same locations within the western portion of the site and nearly the same footprint east of the Caltrain right-of-way. Development would provide the same regional roadway connections and meet the same access requirements for police and fire service response as the Specific Plan. Thus, impacts would be similar to the Specific Plan.

Hydrology and Water Quality

Protection of Water Quality

The amount of grading and construction needed for Proposed Density development around an operating 45-acre LMF would be the same as for the Specific Plan, including the high potential for erosion and siltation and release of pollutants. Because this alternative would have the same development footprint and roadway systems as the Specific Plan, the potential for release of urban pollutants to the Brisbane Lagoon and to San Francisco Bay via Visitacion Creek following construction would be the same as the Specific Plan. This alternative would implement Best Management Practices outlined in required National Pollution Discharge Elimination System (NPDES) permits, stormwater pollution prevention plans (SWPPPs), and the requirements of NPDES Provision C.3 in combination with the same mitigation measures as the Specific Plan. Impacts would therefore be the same as those of the Specific Plan.

Groundwater Recharge and Sustainable Management

Proposed Density development around an operating 45-acre LMF would result in a similar amount of impervious surface area as the Specific Plan. Because the local groundwater basin is not used as a potable or non-potable water supply and is hydraulically connected to the Bay and lagoon, this alternative would not interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level that could impede sustainable management of a groundwater basin or cause subsidence for the same reasons as the Specific Plan. In addition, as demonstrated in the Water Supply Assessment prepared by Cal Water, Baylands development would have no effect on groundwater pumping within South San Francisco. Thus, impacts would be similar to those of the Specific Plan.

Flood Hazards

Proposed Density development around an operating 45-acre LMF would construct a similar impermeable surface area and generate a similar increase in stormwater runoff as the Specific Plan. This alternative would comply with the same flood protection standards and mitigation measures as the Specific Plan. Impacts would be similar to the Specific Plan.

Release of Pollutants Due to Flood, Emergent Groundwater, Tsunami, or Seiche

The Specific Plan area is not located within a tsunami hazard zone, and on-site water storage tank facilities would be designed and constructed to withstand anticipated oscillations in water surface caused by an earthquake. Further, the risk of release of pollutants attributable to inundation would be negligible since potential pollutants would not be present at the ground surface and no facilities storing hazardous materials would be located downstream of Baylands water storage facilities. In addition, this alternative would be subject to the same less than significant potential for emergent groundwater as the Specific Plan. Thus, impacts would be the same as for the Specific Plan.

Geology, Soils, and Seismicity

Fault Rupture

Because there are no known active or potentially active fault traces across the Baylands, and the site is not located within an Alquist-Priolo Earthquake Fault Zone, no impact would occur.

Seismic Ground Shaking

Development of this alternative would be subject to a similar risk of damage related to seismic ground shaking as the Specific Plan. Development would also be required to conform to the same California Building Code (CBC) seismic design parameters and mitigation measures as the Specific Plan, which would provide an appropriate level of safety and reduce hazards from strong seismic ground shaking to a similar less than significant level as the Specific Plan.

Liquefaction and Seismic-Related Ground Failure

Because of the presence of high groundwater and loose, unconsolidated soils underlying both the western and eastern portions of the Specific Plan area, this alternative would be subject to similar liquefaction hazards as the Specific Plan. Proposed Density development around an operating 45-acre LMF would be required to conform to the same site-specific foundation design parameters and EIR mitigation measures as the Specific Plan. Thus, impacts would be similar to the Specific Plan.

Slope Stability

Site grading would be similar to the Specific Plan. Site-specific development projects would be required to comply with the same CBC requirements for slope stability as the Specific Plan. Impacts would therefore be similar to the less than significant impacts of the Specific Plan.

Expansive Soils and Soil Corrosivity

Wherever Bay Mud is present, such as along Bayshore Boulevard, and during construction of deep foundations, corrosive and expansive subsurface soils are likely to be encountered. Site-specific development projects for this alternative would be designed and constructed to comply with the requirements of final site-specific design geotechnical reports, which would ensure appropriate design and construction to mitigate soil corrosivity and expansive soils hazards for each building and infrastructure project. Compliance with the CBC and EIR mitigation measures would result in hazards from soil corrosivity and expansive soils similar to the less than significant impacts of the Specific Plan.

Paleontological Resources

The only proposed deep excavations that could disturb significant paleontological resources within the Colma or Merced Formations would be pile foundation installation. Because installation of pile foundations would render any potentially valuable specimens irretrievable, such installation is not typically considered to cause significant impacts. This alternative would also have the same unlikely potential that excavations for other construction activities would be deep enough to encounter paleontological resources as the Specific Plan. Because this alternative would have the same potential for such excavations and would be subject to the same mitigation measures, impacts would be the same as for the Specific Plan.

Use of Septic Tanks or Alternative Wastewater Disposal Systems

All Baylands development would be connected to a municipal wastewater system and neither septic tanks nor alternative wastewater disposal systems would be used.

Utilities, Service Systems, and Water Supply

Water Supply

Proposed Density development around an operating 45-acre LMF would consume the same amount of potable water, generate the same amount of recycled water, and have the same impact as the Specific Plan.

Construction and Improvement of Utility and Service System Facilities

Demolition, grading, and construction of utility facilities would be the same as for the Specific Plan and would result in the same less than significant impacts.

Consistency with Solid Waste Management Policies

Because this alternative would generate the same amount of solid waste on a per-unit basis and achieve the same waste diversion rate as the Specific Plan, impacts would be the same as for the Specific Plan.

Landfill Capacity

Proposed Density development around an operating 45-acre LMF would generate the same total amount of solid waste, be subject to the same diversion programs, and achieve the same waste diversion rate as the Specific Plan. Thus, impacts would be the same as for the Specific Plan.

Public Services and Facilities

Adverse Physical Environment Effects Associated with Construction or Improvements of Fire Protection, Police, School, and Other Public Facilities

Demolition, grading, and construction of fire protection, police, school, and other facilities to serve Baylands development would be the same as for the Specific Plan and would result in the same less than significant impacts in relation to police, fire protection, and schools. This alternative would also generate similar demands, result in similar impacts, and be subject to the same mitigation measures as the Specific Plan in relation to libraries and the City's corporation yard.

Recreation Resources

Physical Deterioration of a Park or Recreational Facility

Proposed Density development around an operating 45-acre LMF would generate the same population increase and nearly the same amount of parkland as the Specific Plan. Thus, parkland provided by this alternative would exceed the 5.03 acres per 1,000 population of parkland currently available to Brisbane residents and therefore not cause any physical deterioration of existing parks and recreational facilities within the City. Because population growth would be the same as for the Specific Plan, this alternative would have the same impact on existing community facilities and be subject to the same mitigation requirements, resulting in a similar less than significant with mitigation incorporated impact as the Specific Plan.

Physical Deterioration of Candlestick Point Windsurfing Resources

Proposed Density development around an operating 45-acre LMF would not necessitate increasing the height of buildings close to the eastern boundary of the site. As a result, impacts would be similar to the Specific Plan.

Wildland Fire

Exacerbate Fire Hazards

Proposed Density Development around an operating 45-acre LMF would result in similar development and population/employment growth as the Specific Plan. Wildland fire hazard impacts would be similar to the Specific Plan.

Evaluation of Proposed Density Development around an Operating 45-Acre LMF in Relation to Project Objectives

By developing the same land uses as the Specific Plan within the area outside of the 45-acre LMF, this alternative would implement the Brisbane General Plan, including GP-1-18 and Measure JJ. In addition, this alternative would achieve each of the overarching and other objectives (see **Table 8-7**). Proposed Density development around an operating 45-acre LMF provides for productive reuse of the Baylands along with restoration and enhancement of on-site resources. Housing opportunities for all economic segments of the community would be provided to meet the City's RHNA and adopted Housing Element obligations (see **Table 4.4-1**), along with providing economic development opportunities and fiscal benefits for the community.

Feasibility of Alternative 1, Proposed Density Development around an Operating 45-Acre LMF, and Overall Conclusion

Proposed Density development around an operating 45-acre LMF would be consistent with the Brisbane General Plan. Developing the same overall land use program as the Specific Plan outside of an operating 45-acre LMF would have minimal effect on the intensity of development compared to the Specific Plan. As such, Proposed Density development around an operating 45-acre LMF would be both reasonable and potentially feasible per the requirements of CEQA Guidelines Section 15126.6(a).

Overall, Project Density development around an operating 45-acre LMF would result in similar environmental impacts as the Baylands Specific Plan. Alternative 1, Proposed Density development around an operating 45-acre LMF, would neither avoid nor reduce significant unavoidable impacts resulting from the 2025 Specific Plan project.

Table 8-7: Evaluation of Alternative 1, Proposed Density Development Around an Operating 45-Acre LMF in Relation to Project Objectives

Project Objectives	Extent to Which Alternative 1, Proposed Density Development Around an Operating 45-Acre LMF Would Achieve Objectives
The underlying purpose of the Baylands Specific Plan and the development it permits is to:	
Provide for the productive reuse of this brownfield site in a manner that eliminates ongoing ecological damage and ensures the safety of all who will use the Baylands.	Proposed Density development around an operating 45-acre LMF would require site remediation and Title 27 landfill closure prior to development. This alternative would eliminate ongoing ecological damage, provide for productive reuse of the Baylands, and ensure the safety of all who will use the site to the same degree as the 2025 Specific Plan project.
Project Objectives for the Baylands are to:	
• Preserve and enhance the site's natural resources and historic features within a system of permanent open space that: o Restores and enhances wetlands and natural habitats within the Baylands; o Promotes visual connectivity between the Baylands, San Bruno Mountain, and San Francisco Bay; o Adapts to climate change and sea level rise; and o Provides a range of recreational opportunities and open space experiences for Baylands residents and workers, as well as for the larger Brisbane community.	This alternative would provide for restoration and enhancement of on-site habitat areas and restoration/adaptive reuse of the historic Roundhouse. Proposed Density development around an operating 45-acre LMF would also restore and enhance habitats within Visitacion Creek, along the north shore of the lagoon, and on Icehouse Hill. Relocating commercial development within the eastern portion of the site outside of an operating 45-acre LMF would not require increasing office building heights to an extent that would increase obstructions to views of San Bruno Mountain and the San Francisco Bay compared to the Specific Plan. Proposed Density development around an operating 45-acre LMF would protect development from adverse effects of climate change and sea level rise through an adaptation strategy that would provide for wetlands and non-wetland waters within Visitacion Creek and along the north shore of the lagoon to adapt naturally to sea level rise and increasing tidal influence.
• Implement the City's Housing Element by providing a mix of housing types, sizes, and densities that contributes to local and regional housing needs for all economic segments of the community, as well as for families and individuals of all ages and physical abilities.	Proposed Density development around an operating 45-acre LMF would provide a sufficient mix and intensity of residential building types to provide opportunities for production of housing for all economic segments of the community in accordance with the City's Housing Element.
• Enhance Brisbane's economic vitality by ensuring that Baylands development will be revenue positive to the City.	Proposed Density development around an operating 45-acre LMF provides the same mix of housing and income-generating commercial office and hotel uses as the Specific Plan. This alternative would therefore also generate similar revenue-positive municipal revenues and costs as the 2025 Specific Plan project.
• Establish the Baylands as a leading model of sustainable development consistent with the principles of the City's Sustainability Framework for the Baylands (Integral Group 2015).	Proposed Density development around an operating 45-acre LMF would include all of the sustainability features set forth in the Specific Plan and EIR mitigation measures and achieve consistency with the principles of the Sustainability Framework and this objective to the same degree as the Specific Plan.
• Attract office-based employment to the Baylands that provides a broad range of high-paying jobs as well as training and advancement opportunities for the community's young adults.	Proposed Density development around an operating 45-acre LMF would generate the same mix of on-site employment as to the Specific Plan and achieve this objective to the same degree as the Specific Plan.
• Enable residents, workers, and visitors to be less dependent on cars.	This alternative would provide similar features as the Specific Plan to reduce dependency on motor vehicle travel and achieve this objective to the same degree as the Specific Plan.

b. Alternative 2: Proposed Density, Balanced Commercial

The purpose of this alternative is to provide a more balanced distribution of commercial development than proposed in the Specific Plan consistent with General Plan policy that "non-residential development shall be distributed both to the west and to the east of the rail line" and to determine whether the significant impacts of Specific Plan development could be reduced with a more balanced distribution of commercial development[408] while retaining the same amount of housing as the Specific Plan.

Land Use and Planning Policies

Physical Division of an Existing Community

Proposed Density, Balanced Commercial development would provide the same configuration of residential and commercial development, recreational and habitat areas, and the same roadway and non-motorized transportation system as the Specific Plan throughout the site. Proposed Density, Balanced Commercial development would include the same construction projects affecting area roadways as the Specific Plan, would be subject to the same requirements and mitigation measures, and would therefore result in the same construction impacts as the Specific Plan. This alternative would provide the same connectivity within the Specific Plan, to the Caltrain Bayshore station, and to the US 101 freeway as the Specific Plan. Proposed Density, Balanced Commercial development would therefore have the same (less than significant) impacts in relation to dividing an existing community as would the proposed Specific Plan.

Consistency with Local and Regional Plans

Proposed Density, Balanced Commercial development would be consistent with the General Plan's development intensity standards for the Baylands. Development of 2,200 dwelling units is at the top end of the range for housing specified in the General Plan and the same as that of the Specific Plan. Development of the same 6.5 million s.f. of commercial office space and an additional 500,000 s.f. of hotel use as the Specific Plan would also be consistent with the General Plan. Consistency with local and regional plans would be the same as for the Specific Plan.

Population and Housing

Induce Substantial Unplanned Growth

Proposed Density, Balanced Commercial development provides for the same number of dwelling units (2,200) and would result in the same resident population as the Specific Plan

[408] The proportional distribution of commercial development between the western and eastern portions of the Baylands in this alternative is similar to the proportional distribution of commercial, retail, and R&D uses in the previously proposed 2011 Specific Plan.

(4,095) at buildout, which represents planned growth. In addition, this alternative provides for the same amount of commercial office space (6.5 million s.f.) and hotel use (500,000 s.f.) within the Baylands as the Specific Plan, which represents planned growth. Impacts would be the same as the Specific Plan (less than significant).

Displacement of Existing Housing or Businesses

Because Proposed Density, Balanced Commercial development would have the same footprint as the Specific Plan within the Baylands, it would displace the same 231,400 s.f. of existing industrial businesses along Industrial Way, resulting in the same less than significant impact. It would also affect the Golden State Lumber laydown yard in the same manner as the Specific Plan, which would result in the same less than significant physical environmental impact and the same economic impact as the Specific Plan.

Housing for All Economic Segments of the Community

The zoning to implement this alternative would provide for the same number of dwelling units as the Specific Plan (2,200) and would be capable of meeting the City's quantified housing objectives for all segments of the community for the 2023-2031 housing element cycle to the same degree as the Specific Plan.

Urban Decay

Because Proposed Density, Balanced Commercial development would provide the same amount of residential, retail, and office development as the Specific Plan, it would generate the same demand for retail uses and have the same less than significant urban decay impacts.

Aesthetic and Visual Resources

Public Views of Identified Scenic Resources (San Bruno Mountain and Adjacent Ridgelines, San Francisco Bay, and the Brisbane Lagoon)

By shifting 400,000 s.f. of commercial development from the western to the eastern portion of the Baylands, Proposed Density, Balanced Commercial development would provide for reducing the heights of the tallest office buildings west of Caltrain, provide greater opportunities for view corridors, and thereby reduce impacts to public views of identified scenic resources. However, such reduced impacts would be limited since:

- There would be no reduction in the 2,200 dwelling units west of Caltrain;
- The addition of 400,000 s.f. of commercial development within the area east of Caltrain could be accommodated by either (1) increasing the height of buildings to take advantage of views, which could increase visual impacts or (2) by spreading out

increased square footage across the area which would not increase building heights or impacts on scenic vistas; and

- Proposed Density, Balanced Commercial development would be subject to the same mitigation measures protecting scenic vistas as would the Specific Plan.

Thus, impacts on scenic resources resulting from Proposed Density, Balanced Commercial would likely be similar to the Specific Plan.

Impacts to Scenic Resources

Proposed Density, Balanced Commercial development would provide for the same preservation and improvements of existing scenic resources within the Baylands as the Specific Plan. Icehouse Hill and the edges of Brisbane Lagoon would be improved in the same manner as would the Specific Plan, including restoration of wetland and habitat areas. This alternative would also extend the San Francisco Bay Trail through the site. Proposed Density, Balanced Commercial development would thus have a similar less than significant impact as the Specific Plan.

Consistency with Visual Quality-Related Policies and Programs

Proposed Density, Balanced Commercial development would be subject to the same design guidelines and be required to comply with the design principles reflected in the findings that are required to be made by the Planning Commission for approval of a design permit as the Specific Plan. Impacts would thus be similar to those of the Specific Plan.

Nighttime Lighting

Proposed Density, Balanced Commercial development would generate nighttime lighting over the same broad area that is currently largely dark at night and provide similar nighttime lighting of outdoor open space and park areas as the Specific Plan. This alternative would also be subject to the same nighttime lighting standards and EIR mitigation measures as the Specific Plan and result in similar less than significant impacts.

Glare

Proposed Density, Balanced Commercial development would generate a similar amount of glare-producing reflective building materials on building roofs and façades, thematic elements, and above-ground infrastructure as the Specific Plan. This alternative would result in a similar significant glare impact and be required to comply with the same mitigation and performance standards as the Specific Plan. A similar less than significant impact as the Specific Plan would result.

Biological Resources

Candidate, Sensitive, and Special-Status Plants, Animals, and Habitats

Proposed Density, Balanced Commercial development would have the same development footprint and require the same movement of soil from the eastern to the western portion of the Baylands to achieve final grades as would the Specific Plan. Thus, the same impacts to existing species and habitats would occur as the Specific Plan. This alternative would provide the same habitat restoration and enhancement on Icehouse Hill, Visitacion Creek, and the north shore of the Lagoon as the Specific Plan. This alternative would be subject to the same mitigation measures and result in similar less than significant impacts as the Specific Plan.

Wetlands and Non-Wetland Waters Acreage, Functions, and Values

Proposed Density, Balanced Commercial development would have the same development footprint and cause the same loss of wetlands and non-wetland waters during site grading and construction as the Specific Plan. This alternative would also be subject to the same requirements and mitigation measures as the 2025 Specific Plan project and would result in similar impacts.

Movement of Fish and Wildlife Species

Trails, recreational improvements, and habitat restoration and enhancement on Icehouse Hill would be the same as the Specific Plan. Because a similar amount of building glass area would result as the Specific Plan, bird strike impacts would be similar, and implementation of the same mitigation measures would be required. Thus, impacts would be similar to those of the Specific Plan.

Consistency with Brisbane Municipal Code Chapter 12.12, Private Tree Regulations

Proposed Density, Balanced Commercial development would be required to comply with the requirements of Brisbane Municipal Code Chapter 12.12 in relation to tree replacement. As a result, impacts would be the same as those of the Specific Plan.

Consistency with the San Bruno Mountain Habitat Conservation Plan

Because this alternative would provide the same improvements within Icehouse Hill as the Specific Plan, impacts would be the same.

Cultural Resources and Tribal Cultural Resources

Roundhouse and Machinery & Equipment Buildings

Because the development footprint and areas subject to site grading and other ground-disturbing activities would be the same as the Specific Plan, the Roundhouse would be restored for adaptive reuse as is proposed in the Specific Plan and subject to the same EIR mitigation measures. In addition, development surrounding the Roundhouse and Machinery & Equipment building would be the similar to the Specific Plan and would therefore be consistent with their historic character. Thus, impacts would be similar to the Specific Plan.

Archaeological Resources

Because site grading and other ground-disturbing activities would remain the same and development would be subject to the same mitigation measures, impacts would be the same as those of the Specific Plan.

Tribal Cultural Resources

Because no tribal cultural resources have been identified within the Baylands, no impacts would result.

Disturbance of Known or Unknown Human Remains

Because site grading and other ground-disturbing activities would remain the same and development would be subject to the same mitigation measures, impacts would be the same as those of the Specific Plan.

Transportation

Vehicle Miles Traveled

Although this alternative would provide similar access to the Bayshore Caltrain station and comprehensive system of bicycle and pedestrian facilities as the Specific Plan, shifting 400,000 s.f. of commercial office space from the western to the eastern portion of the Specific Plan area would reduce the number of Baylands employees within walking distance of the Caltrain Bayshore station. Thus, Proposed Density, Balanced Commercial development would result in a slight reduction in the use of transit along with a slight increase in per capita employee VMT compared to the Specific Plan. Impacts would, however, remain less than significant.

Transit, Bicycle, and Pedestrian Travel Modes

Proposed Density, Balanced Commercial development would provide a similar comprehensive system of bicycle and pedestrian facilities, including completion of the Bay Trail through the eastern portion of the Baylands and providing bicycle and pedestrian connections to the Bay Trail, Visitacion Creek, and Lagoon Park. However, by shifting some office development from the western to the eastern portion of the Specific Plan area, a slight reduction in use of transit by Baylands employees would occur.

Hazards to Vehicles, Bicyclists, and Pedestrians

All roadways as well as bicycle and pedestrian facilities and trails within the Baylands would be constructed to City standards. Thus, impacts would be similar to those of the Specific Plan.

Emergency Access

The Specific Plan area, each development district, and each block within the Baylands would be provided with more than one point of access, facilitating emergency response. Because the extension of Geneva Avenue over the Caltrain right-of-way to the US 101 freeway and extension of Sierra Point Parkway would be the same as for the Specific Plan, emergency response from the proposed new fire station within the northeastern portion of the Baylands would be similar to the Specific Plan. In addition, because all roadways would be constructed to City standards and this alternative would provide emergency access during flooding events consistent with EIR mitigation requirements, impacts would be similar to the Specific Plan.

Air Quality

Consistency with the 2017 Regional Clean Air Plan

Although this alternative would provide similar access to the Bayshore Caltrain station and comprehensive system of bicycle and pedestrian facilities as the Specific Plan, shifting 400,000 s.f. of commercial office space from the western to the eastern portion of the Specific Plan area would reduce the number of Baylands employees within walking distance of the Caltrain Bayshore station. Thus, Proposed Density, Balanced Commercial development would result in a slight reduction in the use of transit along with a slight increase in VMT, which would increase mobile source emissions. This alternative would, however, include all of the same sustainability features and be subject to the same mitigation measures as the Specific Plan. Proposed Density, Balanced Commercial development would therefore be consistent with the 2017 Clean Air Plan.

Increased Emissions of Non-Attainment Criteria Air Pollutants

Proposed Density, Balanced Commercial development would retain the same overall amount and intensity of residential and commercial development as the Specific Plan but would shift

some office development to the eastern portion of the Baylands, which would slightly reduce transit use and increase mobile source emissions. Because the amount of grading required for this alternative would be similar to that required for the Specific Plan, the significant unavoidable construction impact associated with site grading would be similar to the Specific Plan, while the significant unavoidable operations impact would be slightly increased by Proposed Density, Balanced Commercial development.

Exposure of Sensitive Receptors to Substantial Pollutant Concentrations

Because site grading would be similar for Proposed Density, Balanced Commercial development as for the Specific Plan, exposure of off-site receptors to pollutant concentrations resulting from grading activities would be similar to the Specific Plan. Development would be subject to the same mitigation measures and result in a similar less than significant impact with mitigation incorporated as the Specific Plan.

Odors

The potential for odor generation during site grading, construction, and operations would be similar to that of the Specific Plan and would be subject to the same mitigation measures to reduce odor emissions. This alternative would therefore have a similar impact as Specific Plan development.

Greenhouse Gas Emissions

Specific Plan Area Greenhouse Gas (GHG) Emissions

Proposed Density, Balanced Commercial development would result in the same overall amount of development with slightly reduced proximity to transit from office uses compared to the Specific Plan. This alternative would provide a comprehensive system of bicycle and pedestrian facilities throughout the site and complete the Bay Trail through the Baylands. The result would be similar use of transit, bicycle, and pedestrian modes of transportation as well as GHG emissions as the Specific Plan. Residential per capita VMT would remain the same as the Specific Plan while per capita employee VMT and resulting GHG emissions would increase slightly, increasing the Specific Plan's significant unavoidable impact.

Consistency with GHG Reduction Plans, Policies, Performance Standards, and Regulations

This alternative would implement the same GHG reduction features and mitigation measures as the Specific Plan and would therefore be equally consistent with applicable GHG reduction plans, policies, performance standards, and regulations.

Consistency with GHG Reduction Plans, Policies, Performance Standards, and Regulations

This alternative would implement the same GHG reduction features and mitigation measures as the Specific Plan and would therefore be consistent with applicable GHG reduction plans, policies, performance standards, and regulations.

Effect on Regional GHG Emissions

Because Proposed Density, Balanced Commercial development would have the same amount of development with similar use of transit, bicycle, and pedestrian modes of transportation, per capita VMT, and GHG emissions as the Specific Plan, similar reductions in regional VMT and mobile source GHG emissions as the Specific Plan would result.

Energy Resources

Wasteful, Inefficient, or Unnecessary Use of Energy

Proposed Density, Balanced Commercial development would result in the same overall amount of development with similar proximity to transit for Baylands residents and slightly reduced proximity for employees. This alternative would provide a similar comprehensive system of bicycle and pedestrian facilities throughout the site. The result would be slightly increased transportation-related energy use as the Specific Plan. This alternative would generate and store a similar amount of renewable energy as the Specific Plan. On-site buildings would meet Tier 2 CALGreen Standards. Thus, impacts would be similar to the less than significant impacts of the Specific Plan.

Consistency with Applicable Energy Reduction Programs, Plans, Ordinances, and Policies

Proposed Density, Balanced Commercial development would generate, store, and consume a similar amount of renewable energy on-site, as well as consume only a slightly increased amount of transportation-related energy. This alternative would be consistent with applicable energy reduction programs, plans, ordinances, and policies to a similar degree as the Specific Plan.

Noise and Vibration

Temporary Increase in Ambient Noise

The extent of site grading required for Proposed Density, Balanced Commercial development would be similar to that of the Specific Plan, resulting in a similar need for pile foundations and pile driving. Similar significant unavoidable construction noise impacts would therefore result.

Traffic Noise Increase

Proposed Density, Balanced Commercial development would generate a slightly greater amount of traffic as the Specific Plan, although not sufficiently greater so as to increase traffic noise compared to the Specific Plan. Traffic noise impacts would thus be similar to the Specific Plan (significant and unavoidable).

Permanent Increase in Ambient Noise

Proposed Density, Balanced Commercial development would generate noise from the same stationary sources and be subject to the same mitigation measures as the Specific Plan. All development within the Baylands would be required to meet the same performance standards and comply with City noise ordinance requirements. Impacts of this alternative would, therefore, be similar to the Specific Plan (significant and unavoidable).

Exacerbate Land Use/Noise Incompatibilities by Placing People in High Noise Areas

This alternative would retain the Specific Plan's placement of residential uses west of the Caltrain rail line, which would thus experience similar land use/noise incompatibilities. By spreading office development more evenly to the east and west of the Caltrain rail line, a greater amount of office development would be subject to rail noise impacts. Because all development subject to railroad noise levels would be required to implement the same mitigation measures, impacts would be similar to those of the Specific Plan.

Vibration

The extent of site grading required for Proposed Density, Balanced Commercial development would be similar to that of the Specific Plan, resulting in a similar need for pile foundations and pile driving. Similar construction vibration impacts would therefore result. Development of this alternative would generate operational vibration from the same stationary sources as the Specific Plan and result in the same impacts as the Specific Plan.

Exacerbate Human Annoyance or Hazards by Placing Buildings in High Groundborne Vibration Areas

This alternative would retain the Specific Plan's placement of residential uses west of the Caltrain rail line, which would thus experience similar vibration impacts. By spreading office development more evenly to the east and west of the Caltrain rail line, a greater amount of office development would be subject to rail noise impacts. Because all development subject to railroad vibration levels would be required to implement the same mitigation measures, impacts would be similar to those of the Specific Plan.

Hazards and Hazardous Materials

Risks Involved in Transport, Use, Disposal, and Management of Hazardous Materials

Demolition of older buildings potentially containing asbestos or lead-based paints would be the same for Proposed Density, Balanced Commercial development as for the Specific Plan. In addition, because the overall types and intensity of uses for this alternative would be similar to the Specific Plan, the potential for a release of hazardous materials due to the transport, use, disposal, or management of hazardous materials, whether resulting from routine activities or an accident, would also be similar to the Specific Plan. This alternative would be subject to the same extensive set of regulations designed to protect the public and environment from such a release of hazardous materials. Thus, impacts would be similar to those of the Specific Plan.

Create a Health Hazard for an Existing or Planned School Site Due to Release of Hazardous Materials or Proximity of Hazardous Conditions

The location of a school site within the Baylands in relation to locations of hazardous materials sites and emitters would be no different than for the Specific Plan. Thus, the impacts of this alternative would be the same as for the Specific Plan.

Development on a Property That Is Included on a List of Hazardous Materials Sites

The majority of the Baylands site, including the former Brisbane Landfill, OU-SM, and OU-2, is included on databases listing hazardous materials pursuant to Government Code Section 65962.5. Within the western portion of the Baylands, development would occur within operating units OU-SM and OU-2 following site remediation pursuant to the regulatory authority of the San Francisco Bay RWQCB and DTSC.

Proposed Density, Balanced Commercial development would occur within the same footprint within OU-SM, OU-2, and the former Brisbane Landfill, all of which are included on databases listing hazardous materials pursuant to Government Code Section 65962.5. Development of this alternative would be subject to the same policies, requirements, and EIR mitigation measures as the Specific Plan and would thus have a similar less than significant impact as the Specific Plan.

Create an Airport Safety Hazard or Expose People to Excessive Noise of Aircraft Operations

Since none of the Specific Plan area is subject to safety hazards or excessive noise from aircraft operations, this alternative would have the same impacts as the Specific Plan.

Emergency Preparedness and Response

The same amount of residential development proposed for the Specific Plan would occur in the same locations within the western portion of the site, while approximately 400,000 s.f. of commercial use would be shifted from the western to the eastern portion of the Specific Plan

area. Development would provide the same regional roadway connections and meet the same access requirements for police and fire service response as the Specific Plan. Thus, impacts would be similar to the Specific Plan.

Hydrology and Water Quality

Protection of Water Quality

The amount of grading and construction needed for Proposed Density, Balanced Commercial development would be the same as for the Specific Plan, including the high potential for erosion and siltation and release of pollutants. Because this alternative would have the same development footprint and roadway systems as the Specific Plan, the potential for release of urban pollutants to Brisbane Lagoon and to San Francisco Bay via Visitacion Creek following construction would be the same as the Specific Plan. This alternative would implement Best Management Practices outlined in required NPDES permits, SWPPPs and the requirements of NPDES Provision C.3 in combination with the same mitigation measures as the Specific Plan. Impacts would therefore be the same as those of the Specific Plan.

Groundwater Recharge and Sustainable Management

Proposed Density, Balanced Commercial development would result in a similar amount of impervious surface area as the Specific Plan and would therefore not interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level that could impede sustainable management of a groundwater basin or cause subsidence. In addition, as demonstrated in the Water Supply Assessment prepared by Cal Water, Baylands development would have no effect on groundwater pumping within South San Francisco. Thus, impacts would be similar to those of the Specific Plan.

Flood Hazards

Proposed Density, Balanced Commercial development would construct a similar impermeable surface area and generate a similar increase in stormwater runoff as the Specific Plan. This alternative would comply with the same flood protection standards and mitigation measures as the Specific Plan. Impacts would be similar to the Specific Plan.

Release of Pollutants Due to Flood, Emergent Groundwater, Tsunami, or Seiche

The Specific Plan area is not located within a tsunami hazard zone and on-site water storage tank facilities would be designed and constructed to withstand anticipated oscillations in water surface caused by an earthquake. Further, the risk of release of pollutants attributable to inundation would be negligible since potential pollutants would not be present at the ground surface and no facilities storing hazardous materials would be located downstream of Baylands

water storage facilities. In addition, this alternative would be subject to the same less than significant potential for emergent groundwater as the Specific Plan. Thus, impacts would be similar to the Specific Plan.

Geology, Soils, and Seismicity

Fault Rupture

Because there are no known active or potentially active fault traces across the Baylands, and the site is not located within an Alquist-Priolo Earthquake Fault Zone, no impact would occur.

Seismic Ground Shaking

Development of this alternative would be subject to a similar risk of damage related to seismic ground shaking as the Specific Plan. Development would also be required to conform to the same CBC seismic design parameters and mitigation measures as the Specific Plan, which would provide an appropriate level of safety and reduce hazards from strong seismic ground shaking to a similar less than significant level as the Specific Plan.

Liquefaction and Seismic-Related Ground Failure

Because of the presence of high groundwater and loose, unconsolidated soils underlying both the western and eastern portions of the Specific Plan area, this alternative would be subject to similar liquefaction hazards as the Specific Plan. Proposed Density, Balanced Commercial development would be required to conform to the same site-specific foundation design parameters and EIR mitigation measures as the Specific Plan. Thus, impacts would be similar to the Specific Plan.

Slope Stability

Site grading would be similar to the Specific Plan. Site-specific development projects would be required to comply with the same California Building Code requirements for slope stability as the Specific Plan. Impacts would therefore be similar to the less than significant impacts of the Specific Plan.

Expansive Soils and Soil Corrosivity

Wherever Bay Mud is present, such as along Bayshore Boulevard and during construction of deep foundations, corrosive and expansive subsurface soils are likely to be encountered. Site-specific development projects for this alternative would be designed and constructed to comply with the requirements of final site-specific design-level geotechnical reports, which would ensure appropriate design and construction to mitigate soil corrosivity and expansive soils hazards for each building and infrastructure project. Compliance with the CBC and EIR

mitigation measures would result in hazards from soil corrosivity and expansive soils similar to the less than significant impacts of the Specific Plan.

Paleontological Resources

The only deep excavations that could disturb significant paleontological resources within the Colma or Merced Formations would be pile foundation installation. Because installation of pile foundations would render any potentially valuable specimens irretrievable, such installation is not typically considered to cause significant impacts. The potential in this alternative that excavations for construction activities would be deep enough to encounter paleontological resources would be similar to the Specific Plan (unlikely). Because this alternative would have the same potential for such excavations and would be subject to the same mitigation measures, impacts would be the same as the Specific Plan.

Use of Septic Tanks or Alternative Wastewater Disposal Systems

All Baylands development would be connected to a municipal wastewater system and neither septic tanks nor alternative wastewater disposal systems would be used.

Utilities, Service Systems, and Water Supply

Water Supply

Proposed Density, Balanced Commercial development would consume the same amount of potable water, generate the same amount of recycled water, and result in the same impact as the Specific Plan.

Construction and Improvement of Utility and Service System Facilities

Demolition, grading, and construction of utility facilities would be the same as for the Specific Plan and result in the same less than significant impacts.

Consistency with Solid Waste Management Policies

Because this alternative would generate the same amount of solid waste on a per unit basis and achieve the same waste diversion rate as the Specific Plan, impacts would be the same as for the Specific Plan.

Landfill Capacity

Proposed Density, Balanced Commercial development would generate the same amount of solid waste, be subject to the same diversion programs, and achieve the same waste diversion rate as the Specific Plan. Thus, impacts on landfill capacity would be the same as for the Specific Plan.

Public Services and Facilities

Adverse Physical Environment Effects Associated with Construction or Improvements of Fire Protection, Police, School, and Other Public Facilities

Demolition, grading, and construction of fire protection, police, school, and other facilities to serve Baylands development would be the same as for the Specific Plan and result in the same less than significant impacts in relation to police, fire protection, and schools. This alternative would also generate similar demands, result in similar impacts, and be subject to the same mitigation measures as the Specific Plan in relation to libraries and the City's corporation yard.

Recreation Resources

Physical Deterioration of a Park or Recreational Facility

Proposed Density, Balanced Commercial development would generate the same population increase and nearly the same amount of parkland as the Specific Plan. Thus, parkland provided by this alternative would exceed the 5.03 acres per 1,000 population of parkland currently available to Brisbane residents and therefore not cause any physical deterioration of existing parks and recreational facilities within the City. Because population growth would be the same as for the Specific Plan, this alternative would have the same impact on existing community facilities and be subject to the same mitigation requirements, resulting in a similar less than significant impact as the Specific Plan.

Physical Deterioration of Candlestick Point Windsurfing Resources

Proposed Density, Balanced Commercial development would not necessitate increasing the height of buildings close to the eastern boundary of the site. As a result, impacts would be similar to the Specific Plan.

Wildland Fire

Exacerbate Fire Hazards

Proposed Density, Balanced Commercial development would result in similar development and population/employment growth as the Specific Plan. Wildland fire hazard impacts would be similar to the Specific Plan.

Evaluation of Proposed Density, Balanced Commercial Development in Relation to Project Objectives

Proposed Density, Balanced Commercial development would implement the Brisbane General Plan, including GP-1-18 and Measure JJ. In addition, this alternative would achieve each of the

overarching and other objectives (see **Table 8-8**). Proposed Density, Balanced Commercial development provides for productive reuse of the Baylands along with restoration and enhancement of on-site resources. Housing opportunities for all economic segments of the community would be provided to meet the City's RHNA and adopted Housing Element obligations (see **Table 4.4-1**), along with providing economic development opportunities and fiscal benefits for the community.

Feasibility of Alternative 2, Proposed Density, Balanced Commercial Development, and Overall Conclusion

Proposed Density, Balanced Commercial development would be consistent with the Brisbane General Plan and retain the overall development program of the Specific Plan. Relocating 400,000 s.f. of commercial use to the eastern portion of the Baylands would have no effect on the intensity of development. As such, Proposed Density, Balanced Commercial development would be both reasonable and potentially feasible per the requirements of CEQA Guidelines Section 15126.6(a).

Overall, Proposed Density, Balanced Commercial development would result in similar environmental impacts as the Baylands Specific Plan.

Table 8-8: Evaluation of Alternative 2, Proposed Density, Balanced Commercial Development in Relation to Project Objectives

Project Objectives	Extent to Which Alternative 2, Proposed Density, Balanced Commercial Development Would Achieve Objectives
The underlying purpose of the Baylands Specific Plan and the development it permits is to:	
Provide for the productive reuse of this brownfield site in a manner that eliminates ongoing ecological damage and ensures the safety of all who will use the Baylands.	Proposed Density, Balanced Commercial development would require site remediation and Title 27 landfill closure prior to development. This alternative would eliminate ongoing ecological damage, provide for productive reuse of the Baylands, and ensure the safety of all who will use the site.
Project Objectives for the Baylands are to:	
• Preserve and enhance the site's natural resources and historic features within a system of permanent open space that: o Restores and enhances wetlands and natural habitats within the Baylands; o Promotes visual connectivity between the Baylands, San Bruno Mountain, and San Francisco Bay; o Adapts to climate change and sea level rise; and o Provides a range of recreational opportunities and open space experiences for Baylands residents and workers as well as for the larger Brisbane community.	This alternative would provide for restoration and enhancement of on-site habitat areas and restoration/adaptive reuse of the historic Roundhouse. Proposed Density, Balanced Commercial development would also restore and enhance habitats within Visitacion Creek, along the north shore of the lagoon, and on Icehouse Hill. Relocating 400,000 s.f. of commercial development from the western to the eastern portion of the site would not require increasing office building heights to an extent that would increase obstructions to views of San Bruno Mountain and the San Francisco Bay compared to the Specific Plan. Proposed Density, Balanced Commercial development would protect development from adverse effects of climate change and sea level rise through an adaptation strategy that would provide for wetlands and non-wetland waters within Visitacion Creek and along the north shore of the lagoon to adapt naturally to sea level rise and increasing tidal influence.

Project Objectives	Extent to Which Alternative 2, Proposed Density, Balanced Commercial Development Would Achieve Objectives
• Implement the City's Housing Element by providing a mix of housing types, sizes, and densities that contributes to local and regional housing needs for all economic segments of the community, as well as for families and individuals of all ages and physical abilities.	Proposed Density, Balanced Commercial development would provide a sufficient mix and intensity of residential building types to provide opportunities for production of housing for all economic segments of the community in accordance with the City's Housing Element.
• Enhance Brisbane's economic vitality by ensuring that Baylands development will be revenue positive to the City.	Proposed Density, Balanced Commercial development provides the same mix of housing and income-generating commercial office and hotel uses as the Specific Plan. This alternative would therefore also generate similar revenue-positive municipal revenues and costs.
• Establish the Baylands as a leading model of sustainable development consistent with the principles of the City's Sustainability Framework for the Baylands (Integral Group 2015).	Proposed Density, Balanced Commercial development would include all of the sustainability features set forth in the Specific Plan and EIR mitigation measures, achieve consistency with the principles of the Sustainability Framework, and achieve this objective to the same degree as the Specific Plan.
• Attract office-based employment to the Baylands that provides a broad range of high-paying jobs as well as training and advancement opportunities for the community's young adults.	Proposed Density, Balanced Commercial development would generate the same mix of on-site employment as to the Specific Plan and achieve this objective to the same degree as the Specific Plan.
• Enable residents, workers, and visitors to be less dependent on cars.	This alternative would provide similar features as the Specific Plan to reduce dependency on motor vehicle travel and achieve this objective to a similar degree as the Specific Plan.

c. Alternative 3: Proposed Density, Lower Maximum Building Heights

The purpose of this alternative is to evaluate the extent to which reducing maximum building heights within the Baylands would reduce the significant impacts of Specific Plan development.

Land Use and Planning Policies

Physical Division of an Existing Community

Proposed Density, Lower Maximum Building Height development would include the same construction projects affecting area roadways as the 2025 Specific Plan project and be subject to the same requirements and mitigation measures. Because this alternative's configuration of development and open space areas as well as its roadway and non-motorized transportation system would be the same as for the Specific Plan, the Proposed Density, Lower Maximum Height Alternative would have similar (less than significant) impacts in relation to dividing an existing community as would the proposed Specific Plan.

Plan Consistency

Proposed Density, Lower Maximum Height development is consistent with the General Plan's development intensity standards for the Baylands. Development of 2,200 dwelling units is at the top end of the range for housing specified in the General Plan, and the same as that of the

Baylands Specific Plan. Development of the same 6.5 million s.f. of commercial office space and an additional 500,000 s.f. of hotel use as the Specific Plan would also be consistent with the General Plan. Consistency with local and regional plans would be the same as for the Specific Plan.

Population and Housing

Induce Substantial Unplanned Growth

Proposed Density, Lower Maximum Height development provides for the same number of dwelling units (2,200) and would result in the same resident population as the Baylands Specific Plan (4,095) at buildout. This represents the upper end of development permitted by the Brisbane General Plan and is therefore consistent. In addition, this alternative provides for the same amount of commercial office space (6.5 million s.f.) and hotel use (500,000 s.f.) within the Baylands as in the Specific Plan. Baylands employment would therefore be the same as for the Specific Plan. Thus, population and employment growth associated with Proposed Density, Lower Maximum Height development would be considered to be planned growth and impacts would be similar to the Specific Plan's (less than significant).

Displacement of Existing Housing or Businesses

Because the Proposed Density, Lower Maximum Height Alternative involves development of the same footprint as the Specific Plan, the same 231,400 s.f. of existing industrial businesses along Industrial Way would be displaced, resulting in the same less than significant impact. This alternative would also displace Golden State Lumber's laydown area and its ability to receive and ship lumber by rail, resulting in the same less than significant physical environmental impact and the same economic impact as the Specific Plan.

Housing for all Economic Segments of the Community

Proposed Density, Lower Maximum Height development proposes the same 2,200 dwelling units as the Specific Plan and would, therefore, meet City housing objectives for the development of opportunities to provide housing for all segments of the community for the 2023-2031 housing period. By retaining the 2,200 dwelling units proposed in the Specific Plan, an equivalent level of housing opportunities would be available for the development of housing in subsequent Housing Element cycles beyond 2031.

Urban Decay

Because the Proposed Density, Lower Maximum Height Alternative would provide the same amount of residential, retail, and office development as the Specific Plan, it would generate the same demand for retail uses and have the same less than significant urban decay impacts as the Specific Plan.

Aesthetic and Visual Resources

Public Views of Identified Scenic Resources (San Bruno Mountain and Adjacent Ridgelines, San Francisco Bay, and the Brisbane Lagoon)

Reducing development intensity within the western portion of the Baylands by reducing the heights of taller buildings within that area while maintaining the Specific Plan's overall development intensity would most likely be achieved by raising building heights for low and moderate density office buildings, which would reduce obstructions by the tower buildings along the Caltrain right-of-way, while increasing the extent of lower-level obstructions to views of San Francisco Bay and appearance of development as a solid mass compared to the Specific Plan. As shown in **Table 4.5-2a** through **Table 4.5-2r**, while development within the eastern portion of the Baylands has little effect on Bay views, it does block views of San Bruno Mountain from the east, particularly along the US 101 freeway. Lowering building heights east of the Caltrain right-of-way would have little or no effect on views from the US 101 freeway due to the closeness of buildings to the freeway but would reduce blockage of San Bruno Mountain views from more distant vantage points.

Impacts to Scenic Resources

Proposed Density, Lower Maximum Height development would provide for the same preservation and improvements of existing scenic resources within the Baylands as the Specific Plan. The Visitacion Creek corridor, Icehouse Hill, and the edges of Brisbane Lagoon all would be improved in the same manner as would the Specific Plan, including restoration of wetland and habitat areas, which would retain their natural character. This alternative would also extend the San Francisco Bay Trail through Baylands. Thus, this alternative would have the same beneficial effects as would the Specific Plan by preserving 100-foot shoreline band areas around the Visitacion Creek corridor and Brisbane Lagoon and providing public access to the Bay.

Consistency with Visual Quality-Related Policies and Programs

Regardless of the specific density and distribution of land use within the Baylands, development would be required to be consistent with applicable visual-quality-related policies and programs. Specifically, Proposed Density, Lower Maximum Height development would be required to comply with the design principles reflected in the findings that are required to be made by the Planning Commission for approval of a design permit.

Nighttime Lighting

Because total building area and development footprint within the Baylands would be the same as the Specific Plan, this alternative would generate nighttime lighting over the same broad area that is currently largely dark at night.

Proposed Density, Lower Maximum Height development would have the same potential to permit light sources that would result in light trespass and sky glow impacts as the Specific Plan. Because this alternative would be required to comply with the same performance standards and implement the same mitigation measures as the Specific Plan, similar less than significant with mitigation incorporated impacts would result compared to the Specific Plan.

Glare

Proposed Density, Lower Maximum Height development would result in a similar amount of glare-producing reflective materials as the Specific Plan. This alternative would be subject to the same mitigation measures and result in similar less than significant with mitigation incorporated impacts as the Specific Plan.

Biological Resources

Candidate, Sensitive, and Special-Status Plants, Animals, and Habitats

Because the Proposed Density, Lower Maximum Height Alternative would have the same development footprint throughout the Baylands, it would require the same movement of soil from the eastern to the western portion of the Baylands to achieve final grades. Thus, similar impacts to existing species and habitats would occur. This alternative would be subject to the same mitigation requirements as the Specific Plan and would result in similar less than significant with mitigation incorporated impacts.

Wetlands and Non-Wetland Waters Acreage, Functions, and Values

Lowering building heights within the Baylands would not reduce the loss of wetlands and non-wetland waters that would occur during site grading and construction compared to the Specific Plan. Proposed Density, Lower Maximum Height development would result in similar impacts to wetlands and non-wetland waters, be subject to the same mitigation requirements, and result in a similar less than significant with mitigation incorporated impact as the Specific Plan.

Movement of Fish and Wildlife Species

Trails and recreational improvements on Icehouse Hill would be the same as the Specific Plan and result in the same impacts. Because a similar amount of building glass area as the Specific Plan would result, bird strike impacts would be similar. This alternative would be subject to the same mitigation requirements and would result in a similar less than significant with mitigation incorporated impact as the Specific Plan.

Consistency with Brisbane Municipal Code Chapter 12.12, Private Tree Regulations

Proposed Density, Lower Maximum Height development would be required to comply with the requirements of Brisbane Municipal Code Chapter 12.12. As a result, impacts would be the same as the Specific Plan.

Consistency with the San Bruno Mountain Habitat Conservation Plan

Because this alternative would provide the same improvements within Icehouse Hill as would the Specific Plan, impacts would be the same.

Cultural Resources and Tribal Cultural Resources

Roundhouse and Machinery & Equipment Buildings

Because lowering building heights would not change the development footprint or areas subject to site grading and other ground-disturbing activities, the Roundhouse would be restored for adaptive reuse in the same manner as proposed for the Specific Plan. In addition, surrounding development would be compatible with the character of these historic buildings. Thus, this alternative would be subject to the same mitigation measures and the same less than significant with mitigation incorporated impacts as the Specific Plan would result.

Archaeological Resources

Because lowering building heights would not change site grading and other ground-disturbing activities, impacts and required mitigation measures would be the same as for the Specific Plan.

Tribal Cultural Resources

Because no tribal cultural resources have been identified within the Baylands, no impacts would result.

Disturbance of Known or Unknown Human Remains

Because lowering building heights would not change site grading and other ground-disturbing activities, impacts and required mitigation measures would be the same as for the Specific Plan.

Transportation

Vehicle Miles Traveled

Reducing building heights while retaining the same overall intensity of development within the western portion of the Baylands would not substantially change the number Baylands residents or employees within walking distance of the Caltrain Bayshore Station and not affect per capita

VMT. However, lowering building heights within the western portion of the site and the same overall intensity of Specific Plan development by shifting some office development to the eastern portion of the site would decrease the number of employees within walking distance of transit and result in a slight increase in per capita VMT for Baylands employees, although the impact would remain less than significant.

Transit, Bicycle, and Pedestrian Travel Modes

The Proposed Density, Lower Maximum Height Alternative would provide the same comprehensive system of bicycle and pedestrian facilities within the Baylands as the Specific Plan. This alternative would also have similar effects in relation to transit, bicycle, and pedestrian modes of travel. However, shifting some commercial office space from the western to the eastern portion of the site would increase the number of employees working beyond walking distance to the Bayshore Caltrain station. This increased distance would result in a slight reduction in use of transit, as well as reduced use of pedestrian and pedestrian travel.

Hazards to Vehicles, Bicyclists, and Pedestrians

All roadways throughout the Baylands would be constructed to City standards, implementing identified mitigation requirements. Impacts in relation to transportation hazards would thus be similar to the Specific Plan.

Emergency Access

The Specific Plan area, each development district, and each block within the Baylands would continue to have more than one point of access, facilitating emergency response. Extending Geneva Avenue from Bayshore Boulevard over the Caltrain right-of-way to the US 101 freeway and extending Sierra Point Parkway would occur as proposed in the Specific Plan, including implementation of the mitigation requirement to construct the Geneva Avenue bridge section with a six-lane cross section. This alternative would also be subject to requirements for compliance with Brisbane roadway design standards. Thus, this alternative would have similar impacts to the less than significant with mitigation incorporated impact as the Specific Plan.

Air Quality

Consistency with the 2017 Regional Clean Air Plan

Reducing building heights within the western portion of the Baylands while retaining the same amount of residential and commercial development as the Specific Plan would slightly reduce the amount of office development in proximity to transit should some office development be shifted to the eastern portion of the site in comparison to the Specific Plan. The Proposed Density, Lower Maximum Height Alternative would include all of the same features and mitigation measures as the Specific Plan and would be consistent with the 2017 Clean Air Plan.

Increased Emissions of Non-Attainment Criteria Air Pollutants

Reducing building heights within the western portion of the Baylands while retaining the same amount of residential and commercial development as the Specific Plan would slightly reduce the amount of office development in proximity to transit should some office development be shifted to the eastern portion of the site in comparison to the Specific Plan. In addition, the amount of grading required for the Proposed Density, Lower Maximum Height Alternative would be similar to the significant unavoidable impacts of the Specific Plan. Thus, construction and operational emissions would be similar to the Specific Plan.

Exposure of Sensitive Receptors to Substantial Pollutant Concentrations

Because site grading would be similar to the Specific Plan, exposure of off-site receptors to pollutant concentrations resulting from grading activities would be similar. Because the amount of building construction activity would be similar to that of the Specific Plan, impacts to on- and off-site sensitive receptors would be similar to Specific Plan development.

Odors

The potential for odor generation during site grading would be the same as the Specific Plan. The Proposed Density, Lower Maximum Height Alternative would result in a more uniform distribution of development intensity within the western portion of the site but would not substantially change the amount of development either upwind or downwind of the water recycling facility. Thus, odor impacts would be similar to Specific Plan development.

Greenhouse Gas Emissions

Specific Plan Area Greenhouse Gas (GHG) Emissions

Lowering building heights while retaining the same amount of development within the western portion of the Baylands would not change per capita resident of resident VMT, nor would GHG emissions be reduced. Should some commercial office use be shifted east of Caltrain, mobile source emissions would increase slightly. This alternative would provide all of the same features and mitigation measures to reduce GHG emissions as the Specific Plan and would result in a similar significant unavoidable impact as the Specific Plan.

Effect on Regional GHG Emissions

Because Proposed Density, Lower Maximum Height development would have the same amount of development with similar use of transit, bicycle, and pedestrian modes of transportation, per capita VMT, and GHG emissions as the Specific Plan, similar reductions in regional VMT and mobile source GHG emissions as the Specific Plan would result.

Consistency with GHG Reduction Plans, Policies, Performance Standards, and Regulations

The Proposed Density, Lower Maximum Height Alternative would include all of the GHG reduction features and mitigation measures as the Specific Plan and would therefore be similarly consistent with applicable GHG reduction plans, policies, performance standards, and regulations.

Energy Resources

Wasteful, Inefficient, or Unnecessary Use of Energy

Lowering the maximum permitted building heights to 12 stories for commercial development and 8 stories for residential development while retaining the same development intensity as the Specific Plan would decrease the amount of roof area per dwelling unit and square foot of commercial space. Because the Specific Plan's land use plan does not include room for additional buildings, lowering the height of the tallest proposed buildings requires increasing the height of the shortest buildings within the Baylands. Because a substantial portion of the Specific Plan's residential development is anticipated to consist of single family, duplex, and townhouse building types, the Proposed Density, Lower Maximum Height Alternative would require converting a large number of these building types to Multi-Family Low stacked flats within Low Density Residential areas. In addition, a large number of Campus Low-Rise buildings within Mid-Density Commercial areas would be converted to taller Campus Mid-Rise buildings. The net effect would be to reduce the area available for solar energy generation in relation to the number of dwelling units and commercial office square footage compared to the Specific Plan. Thus, this alternative would consume an equal amount of energy as would the Specific Plan while generating less renewable energy. This alternative would, however, include the 55-acre solar field and distributed battery storage proposed for the Specific Plan, while also improving energy conservation by meeting Tier 2 CALGreen standards. As a result, the Proposed Density, Lower Maximum Height Alternative would have a similar less than significant impact as the Specific Plan.

Consistency with Applicable Energy Reduction Programs, Plans, Ordinances, and Policies

This alternative would meet Tier 2 CALGreen standards and provide the same energy conservation features as the Specific Plan, and would be consistent with applicable energy reduction programs, plans, ordinances, and policies.

Noise and Vibration

Temporary Increase in Ambient Noise

The extent of site grading required for the Proposed Density, Lower Maximum Height Alternative would be similar to the Specific Plan, resulting in similar noise impacts. Lowering

the heights of taller buildings while retaining the Specific Plan's overall development intensity would require increasing the heights of lower density buildings, which would likely necessitate pile foundations for more buildings than the Specific Plan. As a result, the Proposed Density, Lower Maximum Height Alternative would likely increase the amount of pile driving needed for Baylands buildings, increasing the severity of the Specific Plan's significant unavoidable impact, even though this alternative would be subject to the same mitigation measures.

Traffic Noise Increase

The Proposed Density, Lower Maximum Height Alternative would generate a similar amount of traffic as the Specific Plan. The net result would be similar traffic noise impacts to those of the Specific Plan.

Permanent Increase in Ambient Noise

The Proposed Density, Lower Maximum Height Alternative would generate noise from the same stationary sources and be subject to the same mitigation measures as the Specific Plan. All development within the Baylands would be required to meet the same performance standards and comply with City noise ordinance requirements. Impacts would therefore be similar to the Specific Plan (significant and unavoidable).

Exacerbate Land Use / Noise Incompatibilities by Placing People in High Noise Areas

Since the tallest buildings proposed by the Specific Plan are located along the west side of the Caltrain line, the Proposed Density, Lower Maximum Height Alternative would reduce the number of dwelling units and amount of commercial office development occurring in high noise areas adjacent to the Caltrain right-of-way. Thus, impacts would be decreased in comparison to the Specific Plan.

Increase in Groundborne Vibration

Because the same grading would be required for the Proposed Density, Lower Maximum Height Alternative, vibration generated during site grading would be unchanged from the Specific Plan, resulting in similar noise impacts. However, lowering the heights of taller buildings while retaining the Specific Plan's overall development intensity would require increasing the heights of lower density buildings, which would likely necessitate pile foundations for more buildings than the Specific Plan. Development of this alternative would be subject to the same mitigation measures as the Specific Plan, resulting in similar impacts.

Exacerbate Human Annoyance or Hazards by Placing Buildings in High Groundborne Vibration Areas

The Proposed Density, Lower Maximum Height Alternative would reduce the heights of the tallest buildings within the Baylands, which the Specific Plan proposes placing along the west side of the Caltrain right-of-way. The result would be to shift some residential and commercial office development further to the west reducing the amount of Baylands subject to existing groundborne vibration. Development that would be subject to existing groundborne vibration would be required to implement the same performance standards and mitigation measures as the Specific Plan.

Hazards and Hazardous Materials

Risks Involved in Transport, Use, Disposal, and Management of Hazardous Materials

Demolition of older buildings potentially containing asbestos or lead-based paints would be the same for the Proposed Density, Lower Maximum Height Alternative as for the Specific Plan. In addition, the types and intensity of uses for this alternative would be similar to the Specific Plan. Because the development footprint of this alternative would be the same as for the Specific Plan, a release of hazardous materials due to the transport, use, disposal, or management of hazardous materials, whether resulting from routine activities or an accident, would adversely affect a similar number of people as would Specific Plan development. Baylands development in this alternative would be subject to the same extensive set of regulations designed to protect the public and environment from such a release of hazardous materials. Thus, impacts would be similar to those of the Specific Plan.

Create a Health Hazard for an Existing or Planned School Site Due to Release of Hazardous Materials or Proximity of Hazardous Conditions

The location of a school site within the Baylands in relation to locations of hazardous materials sites and emitters would be no different than for the Specific Plan. Thus, impacts of this alternative would be similar to the Specific Plan.

Development on a Property that is Included on a List of Hazardous Materials Sites

Proposed Density, Lower Maximum Height development would have the same footprint as the Specific Plan, including the former railyard and former Brisbane Landfill, which are included on databases listing hazardous materials pursuant to Government Code Section 65962.5. The same site remediation and final landfill closure pursuant to Title 27 requirements would be implemented for this alternative as for Specific Plan development. Development within the Baylands would be subject to the same General Plan policies and EIR mitigation measures as the Specific Plan. Thus, this alternative would have a similar impact as the Specific Plan.

Create an Airport Safety Hazard or Expose People to Excessive Noise of Aircraft Operations

Since none of the Specific Plan area is subject to safety hazards of excessive noise due to aircraft operations, the Proposed Density, Lower Maximum Height Alternative would have the same impacts as the Specific Plan.

Emergency Preparedness and Response

Because this alternative would have the same amount of development within the same footprint as the Specific Plan, impacts would be the same.

Hydrology and Water Quality

Protection of Water Quality

The amount of grading and construction needed for the Proposed Density, Lower Maximum Height Alternative would be the same as for the Specific Plan, including the high potential for erosion and siltation and release of pollutants. Because this alternative would have the same development footprint and roadway systems as the Specific Plan, the potential for release of urban pollutants to the Brisbane Lagoon and to San Francisco Bay via Visitacion Creek following construction would be the same as the Specific Plan. This alternative would implement Best Management Practices outlined in required NPDES permits, SWPPPs and the requirements of NPDES Provision C.3 in combination with the same mitigation measures as the Specific Plan. Impacts would therefore be the same as those of the Specific Plan.

Groundwater Recharge and Sustainable Management

Proposed Density, Lower Maximum Height development would not reduce the site's impervious surface area compared to the Specific Plan due to the requirement for construction of an impermeable cap on the landfill. Because the local groundwater basin is not used as a potable or non-potable water supply and is hydraulically connected to the Bay and Lagoon, this alternative would not interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level that could impede sustainable management of a groundwater basin or cause subsidence. In addition, as demonstrated in the Water Supply Assessment prepared by Cal Water, Baylands development would have no effect on groundwater pumping within South San Francisco. Impacts would be similar to the Specific Plan (less than significant).

Flood Hazards

This alternative would retain the same development footprint and roadway system as the Specific Plan and would generate the same increase in stormwater runoff as the Specific Plan. The Proposed Density, Lower Maximum Height Alternative would comply with the same flood

protection standards and mitigation measures as the Specific Plan. Impacts would therefore be similar to the Specific Plan.

Release of Pollutants Due to Flood, Emergent Groundwater, Tsunami, or Seiche

The Specific Plan area is not located within a tsunami hazard zone and the required on-site water storage tank facilities would be designed and constructed to withstand anticipated oscillations in water surface caused by an earthquake. Further, the risk of release of pollutants attributable to inundation would be negligible since potential pollutants would not be present at the ground surface and no facilities storing hazardous materials would be located downstream of Baylands water storage facilities. In addition, this alternative would be subject to the same less than significant potential for emergent groundwater as the Specific Plan. Thus, impacts would be the same as for the Specific Plan.

Geology, Soils, and Seismicity

Fault Rupture

Because there are no known active or potentially active fault traces across the Baylands, and the site is not located within an Alquist-Priolo Earthquake Fault Zone, no impact would occur.

Seismic Groundshaking

Development of this alternative would be subject to a similar risk of damage related to seismic groundshaking as the Specific Plan. Development would also be required to conform to the same CBC seismic design parameters and geotechnical design requirements as the Specific Plan, which would provide an appropriate level of safety and reduce hazards from strong seismic groundshaking to the same less than significant level as the Specific Plan.

Liquefaction and Seismic-Related Ground Failure

Because of the presence of high groundwater and loose, unconsolidated soils underlying both the western and eastern portions of the Specific Plan area, this alternative would be subject to similar liquefaction hazards as the Specific Plan. Proposed Density, Lower Maximum Height development would be required to conform to the same site-specific foundation design parameters and EIR mitigation measures as the Specific Plan. Thus, impacts would be similar.

Slope Stability

The Proposed Density, Lower Maximum Height Alternative would include the same grading and manufactured slopes as the Specific Plan. Site-specific development projects would be required to comply with the most recent City and California Building Code requirements for

slope stability. Compliance with Building Code requirements and EIR Mitigation Measures would result in similar less than significant impacts as the Specific Plan.

Siltation and Erosion

As would be required for the Specific Plan, site-specific development projects for this alternative would be required to obtain a NPDES Permit for Discharges of Stormwater Associated with Construction Activities from the San Francisco Bay RWQCB for all proposed construction activities. Implementation of specific construction-related best management practices (BMPs) to prevent soil erosion and loss of topsoil would also be required. Implementation of required NPDES permits and SWPPPs would result in similar less than significant impacts as the Specific Plan.

Expansive Soils and Soil Corrosivity

Wherever Bay Mud is present, such as along Bayshore Boulevard and during construction of deep foundations, corrosive and expansive subsurface soils are likely to be encountered. The Proposed Density, Lower Maximum Height Alternative's site-specific development projects would be designed and constructed to comply with the requirements of final site-specific design-level geotechnical reports, which would ensure appropriate design and construction to mitigate soil corrosivity and expansive soils hazards for each building and infrastructure project. The combination of compliance with CBC and City requirements would reduce hazards from soil corrosivity and expansive soils to a similar less than significant level as the Specific Plan.

Paleontological Resources

The only deep excavations that would disturb significant paleontological resources within the Colma Formation or Merced Formation would be pile foundation installation. Because installation of pile foundations would render any potentially valuable specimens irretrievable, such installation is not typically considered to cause significant impacts. This alternative would also have the same unlikely potential that excavations for other construction activities would be deep enough to encounter paleontological resources. Because this alternative would have the same potential for such excavations as the Specific Plan and would be subject to the same mitigation measures, impacts would be similar to the Specific Plan.

Use of Septic Tanks or Alternative Wastewater Disposal Systems

All Baylands development would be connected to a municipal wastewater system and neither septic tanks nor alternative wastewater disposal systems would be used.

Utilities, Service Systems, and Water Supply

Construction and Improvement of Utility and Service System Facilities

Demolition, grading, and construction of utility facilities would be the same as for the Specific Plan and result in the same less than significant impacts.

Water Supply

Because Proposed Density, Lower Maximum Height development would consume the same amount of potable water and generate the same amount of wastewater, impacts would be the same as the Specific Plan.

Consistency with Solid Waste Management Policies

Because this alternative would generate the same amount of solid waste on a per unit basis, be subject to the same requirements, and achieve the same waste diversion rate as the Specific Plan, impacts would be unchanged from the Specific Plan.

Landfill Capacity

The Proposed Density, Lower Maximum Height Alternative would generate the same amount of solid waste, be subject to the same diversion programs, and achieve the same waste diversion rate as the Specific Plan. Thus, impacts on landfill capacity would be unchanged from the Specific Plan.

Public Services and Facilities

Adverse Physical Environment Effects Associated with Construction or Improvements of Fire Protection, Police, School, and Other Public Facilities

Demolition, grading, and construction of fire protection, police, school, and other facilities to serve Baylands development would be the same as for the Specific Plan and result in similar less than significant impacts in relation to police, fire protection, and schools. This alternative would also generate similar demands, result in similar impacts, and be subject to the same mitigation measures as the Specific Plan in relation to libraries and the City's corporation yard.

Recreation Resources

Physical Deterioration of a Park or Recreational Facility

The Proposed Density, Lower Maximum Height Alternative would retain the same amount of parkland and generate the same population increase as the Specific Plan. Thus, parkland provided by this alternative would substantially exceed the 5.03 acres per 1,000 population of

parkland currently available to Brisbane residents and not cause any physical deterioration of existing parks and recreational facilities within the City. Because population growth would be the same as for the Specific Plan, this alternative would have the same impact on existing community facilities as the Specific Plan. The Proposed Density, Lower Maximum Height Alternative would be subject to the same mitigation measures, resulting in the same less than significant with mitigation incorporated impact as the Specific Plan.

Physical Deterioration of Candlestick Point Windsurfing Resources

The Proposed Density, Lower Maximum Height Alternative would necessitate increasing the height of some buildings within the western portion of the Baylands to reduce the height of the tallest buildings while retaining the same amount of development as the Specific Plan. The location and height of commercial office buildings east of the Caltrain right-of-way would remain unchanged. As a result, this alternative would result in a similar less than significant impact as the Specific Plan.

Wildland Fire

Exacerbate Fire Hazards

The Proposed Density, Lower Maximum Building Height Alternative would result in similar development and population/employment growth as the Specific Plan. Wildland fire hazard impacts would be similar to the Specific Plan.

Evaluation of Alternative 3, Proposed Density, Lower Maximum Height Alternative, in Relation to Project Objectives

Lowering the maximum building heights of the tallest proposed buildings within the Baylands would implement the Brisbane General Plan, including GP-1-18 and Measure JJ. In addition, this alternative would achieve each of the project's overarching and other objectives (see **Table 8-9**). The Proposed Density, Lower Maximum Height Alternative provides for productive reuse of the Baylands along with restoration and enhancement of on-site resources. Housing opportunities for all economic segments of the community would be provided to meet the City's RHNA and adopted Housing Element obligations (see **Table 4.4-1**), along with providing economic development opportunities and fiscal benefits for the community. Environmental impacts of the Baylands Specific Plan would be marginally reduced.

Feasibility of Alternative 3, Proposed Density, Lower Maximum Building Height, and Overall Conclusion

The Proposed Density, Lower Maximum Building Height Alternative would be consistent with the Brisbane General Plan and retain the overall development program and land use map of the Specific Plan. Lowering maximum building heights within the western portion of the site would

redistribute development intensity and increase the intensity of lower density development but would not introduce any additional building types or development densities to the Specific Plan area. As such, Proposed Density, Lower Maximum Building Height development would be both reasonable and potentially feasible per the requirements of CEQA Guidelines Section 15126.6(a).

Overall, the Proposed Density, Lower Maximum Building Height would slightly reduce the environmental impacts of the Baylands Specific Plan.

Table 8-9: Evaluation of Alternative 3, Proposed Density, Lower Maximum Building Height Alternative in Relation to Project Objectives

Project Objectives	Extent to Which Alternative 3, Proposed Density, Lower Maximum Building Height Development, Would Achieve Objectives
The underlying purpose of the Baylands Specific Plan and the development it permits is to:	
Provide for the productive reuse of this brownfield site in a manner that eliminates ongoing ecological damage and ensures the safety of all who will use the Baylands.	The Proposed Density, Lower Maximum Building Height Alternative would require site remediation and Title 27 landfill closure prior to development and thereby provide for reuse of the Baylands, eliminate ongoing ecological damage, and ensure the safety of all who will use the site.
Project Objectives for the Baylands are to:	
• Preserve and enhance the site's natural resources and historic features within a system of permanent open space that: o Restores and enhances wetlands and natural habitats within the Baylands; o Promotes visual connectivity between the Baylands, San Bruno Mountain, and San Francisco Bay; o Adapts to climate change and sea level rise; and o Provides a range of recreational opportunities and open space experiences for Baylands residents and workers as well as for the larger Brisbane community.	This alternative provides for restoration and enhancement of on-site habitat areas and restoration/ adaptive reuse of the historic Roundhouse. Habitats within Visitacion Creek, along the north shore of the lagoon, and on Icehouse Hill would be restored and enhanced. By lowering building heights, this alternative would reduce obstructions to views of San Bruno Mountain and the San Francisco Bay compared to the Specific Plan. Development would be protected from adverse effects of climate change and sea level rise through an adaptation strategy that would provide for wetlands and non-wetland waters within Visitacion Creek and along the north shore of the lagoon to adapt naturally to sea level rise and increasing tidal influence.
• Implement the City's Housing Element by providing a mix of housing types, sizes, and densities that contributes to local and regional housing needs for all economic segments of the community, as well as for families and individuals of all ages and physical abilities.	This alternative provides a sufficient amount, mix, and intensity of residential building types to provide housing for all economic segments of the community and zone in accordance with the City's adopted Housing Element.
• Enhance Brisbane's economic vitality by ensuring that Baylands development will be revenue positive to the City.	The Proposed Density, Lower Maximum Building Height Alternative provides an appropriate mix and amount of housing and income-generating commercial office and hotel uses similar to that of the Specific Plan and would be expected to be revenue positive to the City.
• Establish the Baylands as a leading model of sustainable development consistent with the principles of the City's Sustainability Framework for the Baylands (Integral Group 2015).	The Proposed Density, Lower Maximum Building Height Alternative would include all of the sustainability features set forth in the Specific Plan and EIR mitigation measures.

Project Objectives	Extent to Which Alternative 3, Proposed Density, Lower Maximum Building Height Development, Would Achieve Objectives
• Attract office-based employment to the Baylands that provides a broad range of high-paying jobs as well as training and advancement opportunities for the community's young adults.	This alternative would also generate the same types of employment opportunities as the Specific Plan although to a lesser degree.
• Enable residents, workers, and visitors to be less dependent on cars.	This alternative would improve access to the Bayshore Caltrain Station and place all residents within walking distance of the station.

8.4.4 EVALUATION OF REDUCED DENSITY LAND DEVELOPMENT ALTERNATIVES

The following four alternatives each propose the reducing the number of dwelling units and commercial square footage in addition to redistributing development by:

- Reducing the amount of commercial development while retaining the same 2,200 dwelling units proposed by the Specific Plan (Alternative 4);
- Relocating development around and outside of an operating 45-acre LMF (Alternative 5);
- Achieving a more balanced distribution of commercial development on either side of the Caltrain right-of-way (Alternative 6); and
- Reducing the maximum allowed building heights for residential and commercial development within the Baylands (Alternative 7).

a. Alternative 4: Reduced Commercial Development

The purpose of this alternative is to reduce the significant impacts of the Specific Plan land by reducing Baylands commercial development, while retaining the same amount of housing as the Specific Plan.

Land Use and Planning Policies

Physical Division of an Existing Community

The Reduced Commercial Development Alternative would provide the same configuration of development, recreational, and habitat areas, and the same roadway and non-motorized transportation system as the Specific Plan within the western portion of the site. Within the eastern portion of the site, development would be concentrated along the Geneva Avenue and Sierra Point Parkway corridors.

Reduced Commercial Development would include the same construction projects affecting area roadways as the Specific Plan, be subject to the same requirements and mitigation measures, and therefore result in the same construction impacts as the Specific Plan. This alternative would provide the same connectivity to the Caltrain Bayshore station and the US 101 freeway as the Specific Plan. Reduced Commercial Development would therefore have similar (less than significant) impacts in relation to dividing an existing community as the proposed Specific Plan.

Consistency with Local and Regional Plans

Reduced Commercial Development would be consistent with the General Plan's development intensity standards for the Baylands. Development of 2,200 dwelling units is at the top end of the range for housing specified in the General Plan and the same as that of the Baylands Specific Plan. Development of 4.5 million s.f. of commercial office space and an additional 350,000 s.f. of hotel use as the Specific Plan would be less than the maximum allowed but still consistent with the General Plan. Consistency with local and regional plans would be the same as for the Specific Plan.

Population and Housing

Induce Substantial Unplanned Growth

Reduced Commercial Development provides for the same number of dwelling units (2,200) and would result in the same resident population as the Baylands Specific Plan (4,095) at buildout, which represents planned growth. Reducing commercial office space within the Baylands to 4.5 million s.f. with an additional 350,000 s.f. of hotel use would reduce Baylands employment from 19,480 to 16,365 jobs, which would also be consistent with the Brisbane General Plan. Thus, population and employment growth associated with the Reduced Commercial Development Alternative would be considered to be planned growth, not substantial unplanned growth and impacts would be similar to the Specific Plan (less than significant).

Displacement of Existing Housing or Businesses

The Reduced Commercial Development Alternative would maintain the Specific Plan's development footprint within the western portion of the site and would thus displace the same 231,400 s.f. of existing industrial businesses along Industrial Way.

Commercial development east of the Caltrain right-of-way would be concentrated along the Geneva Avenue and Sierra Point Parkway corridors. As would be the case for the Specific Plan, existing uses within this area would be retained, with the exception of the Golden State Lumber laydown yard along the west side of Tunnel Avenue and interim and temporary uses east of Tunnel Avenue. Displacement of the laydown yard would result in the same less than significant physical environmental impact and the same economic impact as the Specific Plan.

Housing for all Economic Segments of the Community

The zoning to implement this alternative would provide for the same number of dwelling units as the Specific Plan (2,200) and would be capable of meeting the City's quantified housing objectives for all segments of the community for the 2023-2031 housing element cycle.

Urban Decay

Reduced Commercial Development would provide the same number of dwelling units as the Specific Plan while reducing the amount of retail and office development. While this alternative would generate less demand for retail space than the Specific Plan due to reduced spending by on-site businesses and employees, sufficient off-site retail development is under construction and proposed such that physical urban decay impacts would remain less than significant.

Aesthetic and Visual Resources

Public Views of Identified Scenic Resources (San Bruno Mountain and Adjacent Ridgelines, San Francisco Bay, and the Brisbane Lagoon)

This alternative would reduce commercial office development west of Caltrain from 4.0 million s.f. proposed by the Specific Plan to 2.8 million s.f. and from 2.5 million s.f. to 1.7 million s.f. east of the Caltrain line that would be clustered along the Geneva Avenue and Sierra Point Parkway corridors. By reducing maximum building heights and implementing EIR mitigation measures, public views of San Francisco Bay would be retained. Thus, impacts on scenic resources resulting from Reduced Commercial Development would be similar to those of the Specific Plan with mitigation incorporated.

Impacts to Scenic Resources

Reduced Commercial Development would provide for the same preservation and improvements to existing scenic resources within the Baylands as the Specific Plan. Icehouse Hill and the edges of Brisbane Lagoon would be improved in the same manner as would the Specific Plan, including restoration of wetland and habitat areas. This alternative would also extend the San Francisco Bay Trail through the site. Reduced Commercial Development would have a similar less than significant impact as the Specific Plan.

Consistency with Visual Quality-Related Policies and Programs

By reducing maximum building heights and commercial office square footage, as well as by implementing EIR mitigation measures, the Reduced Commercial Development Alternative would retain views of the Bay and San Bruno Mountain, as well as provide view corridors through the site. Impacts would thus be reduced from the less than significant impact of the Specific Plan.

Nighttime Lighting

Reduced Commercial Development would generate nighttime lighting over the same footprint and be subject to the same mitigation requirements as the Specific Plan. This alternative would therefore result in similar less than significant impacts as the Specific Plan.

Glare

Reduced Commercial Development would generate a reduced amount of façade area, while retaining a similar amount of above-ground infrastructure as the Specific Plan.

This alternative would be required to comply with the same mitigation and performance standards as the Specific Plan. Due to a reduced amount of façade area, impacts would be reduced compared to the Specific Plan.

Biological Resources

Candidate, Sensitive, and Special-Status Plants, Animals, and Habitats

Reduced Commercial Development would have a similar development footprint within the western portion of the Baylands and require similar movement of soil from the eastern to the western portion of the Baylands to achieve final grades as the Specific Plan. Thus, similar impacts to existing species and habitats would occur. This alternative would provide the same habitat restoration and enhancement as the Specific Plan and would be subject to the same mitigation measures. A similar less than significant with mitigation incorporated impact as the Specific Plan would result.

Wetlands and Non-Wetland Waters Acreage, Functions, and Values

Reduced Commercial Development would have a similar development footprint within the western portion of the Baylands and require similar movement of soil from the eastern to the western portion as the Specific Plan, which would cause the same loss of wetlands and non-wetland waters during site grading and construction as the Specific Plan.

Site grading pursuant to a City grading permit to achieve final grades within the western portion of the site would cause the same loss of wetland and non-wetland waters within Visitacion Creek as the Specific Plan along with the same restoration. In addition, construction of Lagoon Park and realignment of Lagoon Road would result in the same loss of existing wetlands and non-wetland waters along the north shore of the lagoon along with the same restoration. This alternative would be subject to the same mitigation requirements as the Specific Plan and would therefore result in the same less than significant with mitigation incorporated impacts.

Movement of Fish and Wildlife Species

Trails, recreational improvements, and habitat restoration and enhancement on Icehouse Hill would be the same as the Specific Plan. Because a reduced amount of building glass area would result than the Specific Plan, bird strike impacts would be reduced but still require implementation of the same mitigation measures. Thus, impacts would be reduced from the Specific Plan.

Consistency with Brisbane Municipal Code Chapter 12.12, Private Tree Regulations

Reduced Commercial Development would be required to comply with the requirements of Brisbane Municipal Code Chapter 12.12 in relation to tree replacement. As a result, impacts would be the same as those of the Specific Plan.

Consistency with the San Bruno Mountain Habitat Conservation Plan

Because this alternative would provide the same habitat improvements on Icehouse Hill and be subject to the same mitigation requirements as the Specific Plan, impacts would be the same.

Cultural and Tribal Cultural Resources

Roundhouse and Machinery & Equipment Buildings

Because the development footprint and areas subject to site grading and other ground-disturbing activities would be unchanged from the Specific Plan within the western portion of the site, the Roundhouse would be restored for adaptive reuse as is proposed in the Specific Plan and subject to the same EIR mitigation measures. In addition, development surrounding the Roundhouse and Machinery & Equipment building would be consistent with their historic character. Thus, impacts would be the same as for the Specific Plan.

Archaeological Resources

Because site grading and other ground-disturbing activities would remain the same and development would be subject to the same mitigation measures, impacts would be the same as those of the Specific Plan.

Tribal Cultural Resources

Because no tribal cultural resources have been identified within the Baylands, no impacts would result.

Disturbance of Known or Unknown Human Remains

Because site grading and other ground-disturbing activities would remain the same and development would be subject to the same mitigation measures, impacts would be the same as those of the Specific Plan.

Transportation

Vehicle Miles Traveled

Reduced Commercial Development would retain a similar number of Baylands residents but a reduced number of employees within walking distance of the Caltrain Bayshore station as the Specific Plan. This alternative would provide a similar comprehensive system of bicycle and pedestrian facilities, including completion of the Bay Trail through the eastern portion of the Baylands and providing bicycle and pedestrian connections to the Bay Trail, Visitacion Creek, and Lagoon Park. Because commercial development east of Caltrain would be concentrated along the Geneva Avenue and Sierra Point Parkway corridors further from the Bayshore Caltrain station, there would be decreased use of transit, bicycle, and pedestrian modes of transportation with a slight (though still less than significant) increase in per capita employee VMT compared to the Specific Plan.

Transit, Bicycle, and Pedestrian Travel Modes

Reduced Commercial Development would provide a similar comprehensive system of bicycle and pedestrian facilities, including completion of the Bay Trail through the eastern portion of the Baylands and providing bicycle and pedestrian connections to the Bay Trail, Visitacion Creek, and Lagoon Park. Because commercial development east of Caltrain would be concentrated along the Geneva Avenue and Sierra Point Parkway corridors further from the Bayshore Caltrain station, there would be decreased use of transit, bicycle, and pedestrian modes of transportation compared to the Specific Plan. Because use of trails and transit by Baylands residents would remain unchanged and the decreased use of trails and transit by Baylands employees would be limited to the eastern portion of the site, impacts would remain less than significant.

Hazards to Vehicles, Bicyclists, and Pedestrians

All roadways as well as bicycle and pedestrian facilities and trails within the Baylands would be constructed to City standards. Thus, impacts would be similar to those of the Specific Plan with mitigation incorporated.

Emergency Access

All site-specific developments within the Baylands would be provided with more than one point of access facilitating emergency response, similar to the Specific Plan. Because the extension of Geneva Avenue over the Caltrain right-of-way to the US 101 freeway and extension of Sierra Point Parkway would be the same as for the Specific Plan, emergency response from the proposed new fire station within the northeastern portion of the site would be similar to the Specific Plan. In addition, because all roadways would be constructed to City standards and this alternative would provide emergency access during flooding events consistent with EIR mitigation requirements, impacts would be similar to the Specific Plan.

Air Quality

Consistency with the 2017 Regional Clean Air Plan

Reduced Commercial Development would retain the same amount and intensity of residential development in proximity to transit within the western portion of the site. Commercial development within the eastern portion of the site would be concentrated along the Geneva Avenue and Sierra Point Parkway corridors and would be dependent on Baylands shuttle service for connection to the Bayshore Caltrain station. In addition, this alternative would include the same sustainability features and be subject to the same air-quality-related mitigation measures as the Specific Plan. While there would be a slight per capita increase in employee use of vehicular travel to and from work, development of this alternative would be consistent with MTC's transit-oriented development policy and would also be consistent with the 2017 Clean Air Plan.

Increased Emissions of Non-Attainment Criteria Air Pollutants

Because the amount of grading required for Baylands development is dictated by the need to raise the western portion of the Baylands using soil from the eastern portion of the site, grading for this alternative would be similar to that required for the Specific Plan. Reduced Commercial Development would retain the same amount and intensity of residential development in proximity to transit, while commercial development within the eastern portion of the site would be concentrated along the Geneva Avenue and Sierra Point Parkway corridors and would be dependent on Baylands shuttle service for connection to the Bayshore Caltrain station. Thus, the significant unavoidable construction impact associated with site grading for Reduced Commercial Development would be similar to the Specific Plan. Because the ratio of on-site employment to housing would be reduced in this alternative compared to the Specific Plan, per capita employee vehicular travel would increase, resulting in a more severe significant and unavoidable operations impact than the Specific Plan.

Exposure of Sensitive Receptors to Substantial Pollutant Concentrations

Because site grading would be similar for Reduced Commercial Development as for the Specific Plan, exposure of off-site receptors to pollutant concentrations resulting from grading activities would be similar to the Specific Plan. Development would be subject to the same mitigation measures and result in a similar less than significant impact with mitigation incorporated as the Specific Plan.

Odors

The potential for odor generation during site grading would be the same as that of the Specific Plan. The Baylands water recycling facility would be subject to the same mitigation measures to reduce odor emissions and would therefore have a similar impact as Specific Plan development.

Greenhouse Gas Emissions

Specific Plan Area Greenhouse Gas (GHG) Emissions

Because the amount of grading required for Baylands development is dictated by the need to raise the western portion of the Baylands using soil from the eastern portion of the site, grading for this alternative would be similar to that required for the Specific Plan. Reduced Commercial Development would retain the same amount and intensity of residential development in proximity to transit, while commercial development within the eastern portion of the site would be concentrated along the Geneva Avenue and Sierra Point Parkway corridors and would be dependent on Baylands shuttle service for connection to the Bayshore Caltrain station. Because the ratio of on-site employment to housing would be reduced in this alternative compared to the Specific Plan, per capita employee vehicular travel would increase, resulting in a more severe significant and unavoidable impact than the Specific Plan.

Effect on Regional GHG Emissions

Because Reduced Commercial Development would reduce the ratio of on-site employment to housing compared to the Specific Plan, per capita employee vehicular travel would increase, resulting in smaller reductions in regional VMT and mobile source GHG emissions as the Specific Plan.

Consistency with GHG Reduction Plans, Policies, Performance Standards, and Regulations

This alternative would implement the same GHG reduction features and mitigation measures as the Specific Plan and would therefore be consistent with applicable GHG reduction plans, policies, performance standards, and regulations.

Energy Resources

Wasteful, Inefficient, or Unnecessary Use of Energy

By reducing the amount of commercial development in relation to on-site housing and concentrating commercial uses east of Caltrain along the Geneva Avenue and Sierra Point Parkway corridors, Reduced Commercial Development would:

- Reduce total energy consumption;
- Expand the 55-acre solar field, producing a greater portion of the Baylands' energy demand within the Specific Plan area; and
- Slightly increase higher per capita energy consumption for Baylands employees commuting to and from work.

This alternative would provide a comprehensive system of bicycle and pedestrian facilities as well as a shuttle system throughout the site and would meet Tier 2 CALGreen Standards. Thus, impacts would be similar to the less than significant impacts of the Specific Plan.

Consistency with Applicable Energy Reduction Programs, Plans, Ordinances, and Policies

Reduced Commercial development would include all energy conservation measures as the Specific Plan. Compared to the Specific Plan, this alternative would expand the 55-acre solar field and generate more on-site renewable energy while storing a similar amount and consuming less renewable energy on-site. Reduced Commercial Development would consume more transportation-related energy than the Specific Plan on a per capita basis due to concentrating commercial uses east of Caltrain along the Geneva Avenue and Sierra Point Parkway corridors. Overall, Reduced Commercial Development would be consistent with applicable energy reduction programs, plans, ordinances, and policies to a similar degree as the Specific Plan.

Noise and Vibration

Temporary Increase in Ambient Noise

The extent of site grading required for Reduced Commercial Development would be similar to that of the Specific Plan. Reducing the overall amount of commercial development while concentrating commercial uses east of Caltrain along the Geneva Avenue and Sierra Point Parkway corridors would likely yield fewer buildings requiring pile foundations and pile driving. Reduced Commercial Development would reduce but not avoid the significant unavoidable impacts of the 2025 Specific Plan project.

Traffic Noise Increase

Reduced Commercial Development would reduce the number of on-site employees; however, as discussed above, per capita employee transit use would be less for this alternative than for the Specific Plan. Because the overall number of Baylands development-related trips would not change dramatically compared to the Specific Plan, traffic noise impacts would be similar to those of the Specific Plan (significant and unavoidable).

Permanent Increase in Ambient Noise zzz

Reduced Commercial Development would generate noise from the same stationary sources as the Specific Plan. Due to the logarithmic scale used to measure noise, reducing commercial development would not likely be sufficient to substantially reduce permanent increases in ambient noise compared to the Specific Plan. All development within the Baylands would be subject to the same performance standards and mitigation measures and would be required to comply with the City noise ordinance. Impacts would be similar to the Specific Plan (significant and unavoidable).

Exacerbate Land Use/Noise Incompatibilities by Placing People in High Noise Areas

This alternative would place a similar type and amount of development along the west side of the Caltrain rail line and would thus experience similar land use/noise incompatibilities. Office development within the Campus East District would be concentrated along the Geneva Avenue and Sierra Point Parkway corridors away from the Caltrain rail line. As a result, impacts would be less than those of the Specific Plan.

Vibration

The extent of site grading required for Reduced Commercial Development would be similar to that of the Specific Plan. Reducing the amount of commercial development overall while concentrating commercial uses east of Caltrain along the Geneva Avenue and Sierra Point Parkway corridors would likely yield fewer buildings requiring pile foundations and pile driving, reducing but not avoiding the project's significant unavoidable impact.

Exacerbation of Human Annoyance or Hazards by Placing Buildings in High Groundborne Vibration Areas

This alternative would place a similar type and amount of development along the west side of the Caltrain rail line and would thus experience similar human annoyance from railroad-generated vibration. Office development within the Campus East District would be concentrated along the Geneva Avenue and Sierra Point Parkway corridors away from the Caltrain rail line. As a result, impacts would be less than those of the Specific Plan.

Hazards and Hazardous Materials

Risks Involved in Transport, Use, Disposal, and Management of Hazardous Materials

Demolition of older buildings potentially containing asbestos or lead-based paints would be the same for Reduced Commercial Development as for the Specific Plan. In addition, because the commercial development would be reduced, the potential for a release of hazardous materials due to the transport, use, disposal, or management of hazardous materials, whether resulting from routine activities or an accident, would be less than the Specific Plan. Development of this alternative would be subject to the same extensive set of regulations designed to protect the public and environment from such a release of hazardous materials. Thus, impacts would be reduced from the less than significant impacts of the Specific Plan.

Create a Health Hazard for an Existing or Planned School Site Due to Release of Hazardous Materials or Proximity of Hazardous Conditions

The location of a school site within the Baylands in relation to locations of hazardous materials sites and emitters would be no different than for the Specific Plan. Thus, the impacts of this alternative would be the same as for the Specific Plan.

Development on a Property that is Included on a List of Hazardous Materials Sites

The majority of the Baylands site, including the former Brisbane Landfill, OU-SM, and OU-2, is included on databases listing hazardous materials pursuant to Government Code Section 65962.5. Within the western portion of the Baylands, development would occur within operating units OU-SM and OU-2 following site remediation pursuant to the regulatory authority of the San Francisco Bay RWQCB and DTSC.

Reduced Commercial Development would occur within the same footprint within OU-SM and OU-2, and a smaller portion of the former Brisbane Landfill footprint, all of which are included on databases listing hazardous materials pursuant to Government Code Section 65962.5. Development of this alternative would be subject to the same requirements and EIR mitigation measures as the Specific Plan and would thus have a similar less than significant impact as the Specific Plan.

Create an Airport Safety Hazard or Expose People to Excessive Noise of Aircraft Operations

Since none of the Specific Plan area is subject to safety hazards or excessive noise from aircraft operations, this alternative would have the same impacts as the Specific Plan.

Emergency Preparedness and Response

While the amount of commercial development would be reduced, the same amount of housing would be developed as for the Specific Plan. This development proposed for the Specific Plan

would occur in the same locations within the western portion of the site and be concentrated along the Geneva Avenue and Sierra Point Parkway corridors east of the Caltrain right-of-way. Reduced Commercial Development would provide the same regional roadway connections and meet the same access requirements for police and fire service response as the Specific Plan. Thus, impacts would be similar to the Specific Plan.

Hydrology and Water Quality

Protection of Water Quality

The amount of grading and construction required for Reduced Commercial Development would be similar to the Specific Plan, including the high potential for erosion and siltation and release of pollutants during grading and construction. Because this alternative would encompass a smaller development footprint and fewer streets east of Caltrain, the potential for release of urban pollutants to the Brisbane Lagoon and to San Francisco Bay via Visitacion Creek would be less than the Specific Plan. This alternative would implement Best Management Practices outlined in required NPDES permits, SWPPPs and the requirements of NPDES Provision C.3 in combination with the same mitigation measures as the Specific Plan. Impacts would therefore be similar to those of the Specific Plan.

Groundwater Recharge and Sustainable Management

Reduced Commercial Development would result in a similar amount of impervious surface area as the Specific Plan due to the requirement for construction of an impermeable cap on the landfill. Because the local groundwater basin is not used as a potable or non-potable water supply and is hydraulically connected to the Bay and Lagoon, this alternative would not interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level that could impede sustainable management of a groundwater basin or cause subsidence for the same reasons as the Specific Plan. In addition, as demonstrated in the Water Supply Assessment prepared by Cal Water, Baylands development would have no effect on groundwater pumping within South San Francisco. Thus, impacts would be similar to those of the Specific Plan.

Flood Hazards

Reduced Commercial Development would result in a similar impermeable surface area and generate a similar increase in stormwater runoff as the Specific Plan due to the requirement for construction of an impermeable cap on the landfill. This alternative would comply with the same flood protection standards and mitigation measures as the Specific Plan. Impacts would be similar to the Specific Plan.

Release of Pollutants Due to Flood, Emergent Groundwater, Tsunami, or Seiche

The Specific Plan area is not located within a tsunami hazard zone and on-site water storage tank facilities would be designed and constructed to withstand anticipated oscillations in water surface caused by an earthquake. Further, the risk of release of pollutants attributable to inundation would be negligible since potential pollutants would not be present at the ground surface and no facilities storing hazardous materials would be located downstream of Baylands water storage facilities. In addition, this alternative would be subject to the same less than significant potential for emergent groundwater as the Specific Plan. Thus, impacts would be similar to the Specific Plan.

Geology, Soils, and Seismicity

Fault Rupture

Because there are no known active or potentially active fault traces across the Baylands, and the site is not located within an Alquist-Priolo Earthquake Fault Zone, no impact would occur.

Seismic Ground Shaking

All buildings within the site would be required to conform to the same CBC seismic design parameters and mitigation measures as the Specific Plan, which would provide an appropriate level of safety and reduce hazards from strong seismic ground shaking. Development of this alternative would be subject to a lesser risk of damage related to seismic ground shaking than the Specific Plan due to reduced commercial development, resulting in reduced impacts.

Liquefaction and Seismic-Related Ground Failure

Because of the presence of high groundwater and loose, unconsolidated soils underlying both the western and eastern portions of the Specific Plan area, this alternative would be subject to similar liquefaction hazards as the Specific Plan. Reduced Commercial Development would be required to conform to the same site-specific foundation design parameters and EIR mitigation measures as the Specific Plan. Thus, impacts would be slightly less than the Specific Plan due to fewer commercial buildings.

Slope Stability

Site grading would be similar to the Specific Plan. Site-specific development projects would be required to comply with the same California Building Code requirements for slope stability as the Specific Plan. Impacts would therefore be similar to the less than significant impacts of the Specific Plan.

Expansive Soils and Soil Corrosivity

Wherever Bay Mud is present, such as along Bayshore Boulevard, and during construction of deep foundations, corrosive and expansive subsurface soils are likely to be encountered. Site-specific development projects for this alternative would be designed and constructed to comply with the requirements of final site-specific design-level geotechnical reports, which would ensure appropriate design and construction to mitigate soil corrosivity and expansive soils hazards for each building and infrastructure project. Compliance with the CBC and EIR mitigation measures would result in reduced hazards from soil corrosivity and expansive soils compared to the less than significant impacts of the Specific Plan due to reduced building area.

Paleontological Resources

The only deep excavations that could disturb significant paleontological resources within the Colma Formation or Merced Formation would be pile foundation installation. Because installation of pile foundations would render any potentially valuable specimens irretrievable, such installation is not typically considered to cause significant impacts. This alternative would also have the same unlikely potential that excavations for other construction activities would be deep enough to encounter paleontological resources as the Specific Plan. Because this alternative would have the same potential for such excavations and would be subject to the same mitigation measures, impacts would be the similar to the Specific Plan.

Use of Septic Tanks or Alternative Wastewater Disposal Systems

All Baylands development would be connected to a municipal wastewater system and neither septic tanks nor alternative wastewater disposal systems would be used.

Utilities, Service Systems, and Water Supply

Water Supply

Reduced Commercial Development would consume less water than the Specific Plan. Because it would generate less wastewater, this alternative would also generate less recycled water than the Specific Plan, unless sewage generated by the City and Bayshore Sanitary District were to be recycled on-site. As a result, water supply impacts of this alternative would be similar to the Specific Plan.

Construction and Improvement of Utility and Service System Facilities

Demolition, grading, and construction of utility facilities would be the same as for the Specific Plan and result in the same less than significant impacts.

Consistency with Solid Waste Management Policies

Because this alternative would generate solid waste on a similar per unit basis and achieve the same waste diversion rate as the Specific Plan, impacts would be similar to the Specific Plan.

Landfill Capacity

Because of less commercial square footage, Reduced Commercial Development would generate less total solid waste, but be subject to the same diversion programs and achieve the same waste diversion rate as the Specific Plan. Reduced Commercial Development would therefore reduce the Specific Plan's less than significant impact on landfill capacity.

Public Services and Facilities

Adverse Physical Environment Effects Associated with Construction or Improvements of Fire Protection, Police, School, and Other Public Facilities

Demolition, grading, and construction of fire protection, police, school, and other facilities to serve Baylands development would be similar to the Specific Plan. Reduced commercial development would reduce demand for police, fire protection, and schools, reducing the Specific Plan's less than significant impact. This alternative would also reduce demands and be subject to the same mitigation measures as the Specific Plan in relation to libraries and the City's corporation yard thereby reducing the Specific Plan's less than significant with mitigation incorporated impact.

Recreation Resources

Physical Deterioration of a Park or Recreational Facility

Reduced Commercial Development would generate the same population increase and nearly the same amount of parkland as the Specific Plan. Thus, parkland provided by this alternative would exceed the 5.03 acres per 1,000 population of parkland currently available to Brisbane residents and therefore not cause any physical deterioration of existing parks and recreational facilities within the City. Because population growth would be the same as for the Specific Plan, this alternative would have the same impact on existing community facilities and be subject to the same mitigation requirements, resulting in a similar less than significant impact as the Specific Plan.

Physical Deterioration of Candlestick Point Windsurfing Resources

Reduced Commercial Development would not increase the height of buildings close to the eastern boundary of the site. As a result, impacts would be similar to the Specific Plan.

Wildland Fire

Exacerbate Fire Hazards

Reduced Commercial Development would result in similar construction activities within and adjacent to combustible vegetation and would reduce population/employment growth compared to the Specific Plan. Wildland fire hazard impacts would be less than the Specific Plan.

Evaluation of Alternative 4, Reduced Commercial Development, in Relation to Project Objectives

Reduced Commercial Development would implement the Brisbane General Plan, including GP-1-18 and Measure JJ. In addition, this alternative would achieve each of the project's overarching and other objectives (see **Table 8-10**). Reduced Commercial Development provides for productive reuse of the Baylands along with restoration and enhancement of on-site resources. Housing opportunities for all economic segments of the community would be provided to meet the City's RHNA and adopted Housing Element obligations (see **Table 4.4-1**), along with providing economic development opportunities and fiscal benefits for the community.

Table 8-10: Evaluation of Alternative 4, Reduced Commercial Development in Relation to Project Objectives

Project Objectives	Extent to Which Alternative 3, Reduced Commercial Development, Would Achieve Project Objectives
The underlying purpose of the Baylands Specific Plan and the development it permits is to:	
Provide for the productive reuse of this brownfield site in a manner that eliminates ongoing ecological damage and ensures the safety of all who will use the Baylands.	Reduced Commercial Development would require site remediation and Title 27 landfill closure prior to development. This alternative would eliminate ongoing ecological damage, provide for productive reuse of the Baylands, and ensure the safety of all who will use the site.
Project Objectives for the Baylands are to:	
• Preserve and enhance the site's natural resources and historic features within a system of permanent open space that: o Restores and enhances wetlands and natural habitats within the Baylands; o Promotes visual connectivity between the Baylands, San Bruno Mountain, and San Francisco Bay; o Adapts to climate change and sea level rise; and o Provides a range of recreational opportunities and open space experiences for Baylands residents and workers as well as for the larger Brisbane community.	This alternative would restore and enhance habitats within Visitacion Creek, along the north shore of the lagoon, and on Icehouse Hill. This alternative would also restore and provide for adaptive reuse of the historic Roundhouse. By reducing the amount of commercial development compared to the Specific Plan, this alternative would maintain a lower vertical profile of commercial development than the Specific Plan, although the vertical profile of residential development would be unchanged. This alternative would protect development from adverse effects of climate change and sea level rise through an adaptation strategy that would provide for restoration of wetlands and non-wetland waters within Visitacion Creek and along the north shore of the lagoon to adapt naturally to sea level rise and increasing tidal influence.

Project Objectives	Extent to Which Alternative 3, Reduced Commercial Development, Would Achieve Project Objectives
• Implement the City's Housing Element by providing a mix of housing types, sizes, and densities that contributes to local and regional housing needs for all economic segments of the community, as well as for families and individuals of all ages and physical abilities.	Reduced Commercial Development would provide a sufficient mix and intensity of residential building types to provide opportunities for the development of housing for all economic segments of the community in accordance with the City's Housing Element.
• Enhance Brisbane's economic vitality by ensuring that Baylands development will be revenue positive to the City.	Compared to the Specific Plan, commercial office development would be reduced by 30.8 percent while retaining the same amount of hotel development as the Specific Plan. This alternative would be revenue positive for the City although to a lesser degree than the Specific Plan.
• Establish the Baylands as a leading model of sustainable development consistent with the principles of the City's Sustainability Framework for the Baylands (Integral Group 2015).	Reduced Commercial Development would include all of the sustainability features set forth in the Specific Plan and EIR mitigation measures.
• Attract office-based employment to the Baylands that provides a broad range of high-paying jobs as well as training and advancement opportunities for the community's young adults.	While this alternative would produce a lower jobs-to-housing ratio than the Specific Plan, Reduced Commercial Development would generate a mix of on-site employment at a sufficient scale to achieve this objective, although not to the same extent as the Specific Plan.
• Enable residents, workers, and visitors to be less dependent on cars.	This alternative would improve access to the Bayshore Caltrain Station. This alternative would place employee-generating development east of Caltrain along Sierra Point Parkway to take advantage of Bay views, reducing ease of access for employees in the Campus East District to the Caltrain station compared to the Specific Plan.

Feasibility of Alternative 4, Reduced Commercial Development, and Overall Conclusion

Reduced Commercial Development would be consistent with the Brisbane General Plan. The resulting 2,200 dwelling units, 4.5 million s.f. of commercial, and 350,000 s.f. of hotel use would not introduce any additional building types or development densities to the Specific Plan area. As such, Alternative 3, Reduced Commercial Development, would be both reasonable and potentially feasible per the requirements of CEQA Guidelines Section 15126.6 (a).

Overall, Reduced Commercial Development would reduce but would not avoid significant unavoidable impacts resulting from the 2025 Specific Plan project.

b. Alternative 5: Reduced Density Development Around an Operating 45-Acre LMF

The purpose of this alternative is to reduce the significant impacts of Specific Plan by reducing the intensity of development around and outside of an operating 45-acre LMF within the Baylands should the California High-Speed Rail Authority construct and operate such a facility. The analyses below do not address impacts of constructing and operating the LMF facility itself.

Land Use and Planning Policies

Physical Division of an Existing Community

Reduced Density development around an operating 45-acre LMF would include the same construction projects affecting area roadways as the Specific Plan would be subject to the same requirements and mitigation measures, and would therefore result in the same construction impacts as the Specific Plan. Because this alternative would (1) increase renewable energy generation within the eastern portion of the Baylands, (2) reduce the intensity of residential and commercial development, and (3) maintain similar open space areas and roadway and non-motorized transportation system as the Specific Plan, Reduced Density Development around an operating 45-acre LMF would have similar less than significant impacts in relation to dividing an existing community as the proposed Specific Plan.

Consistency with Local and Regional Plans

Reduced Density Development around an operating 45-acre LMF would be consistent with the General Plan's development intensity standards for the Baylands. Development of 1,800 dwelling units is at the low end of the range for housing specified in the General Plan, and approximately 18 percent below that of the Baylands Specific Plan, which represents the General Plan's maximum permitted number of dwelling units. Development of 4.5 million s.f. of commercial/office space would be consistent with the General Plan and would be approximately 30.7 percent less than the 6.5 million s.f. proposed in the Baylands Specific Plan. The same additional 500,000 s.f. of hotel development as the Specific Plan would also be consistent with the General Plan's maximum permitted development. Consistency with General Plan policies as well as with other local and regional plans would be the same as for the Specific Plan.

Population and Housing

Induce Substantial Unplanned Growth

Reduced Density Development around an operating 45-acre LMF provides for the development of 1,800 dwelling units, which would result in approximately 4,015 residents within the Baylands compared to the 4,905 Baylands residents resulting from Specific Plan buildout. This reduced housing and population is consistent with the Brisbane General Plan, which provides for 1,800 to 2,200 dwelling units within the Baylands. Reducing commercial office space within the Baylands to 4.5 million s.f. with an additional 500,000 s.f. of hotel use would reduce Baylands employment from 19,480 to 16,365 jobs, which would also be consistent with the Brisbane General Plan. Thus, population and employment growth associated with this alternative would be considered to be *planned* growth, not substantial unplanned growth and impacts would be the same as the Specific Plan (less than significant).

Displacement of Existing Housing or Businesses

Because Reduced Density Development around an operating 45-acre LMF involves development of the same footprint within the western portion of the Baylands as the Specific Plan, the same 231,400 s.f. of existing industrial businesses along Industrial Way would be displaced, resulting in the same less than significant impact.

Housing for All Economic Segments of the Community

Reduced Density Development around an operating 45-acre LMF proposes 1,800 dwelling units, consistent with the Baylands residential development assumption set forth in the City's adopted Housing Element. This alternative would, therefore, meet City objectives to provide opportunities for the development of housing for all segments of the community within the 2023-2031 Housing Element. By reducing Baylands housing by 400 units compared to the Specific Plan, this alternative would reduce opportunities for the development of housing for subsequent Housing Element updates, which are required on an 8-year basis.[409]

Urban Decay

Because housing would provide less residential, retail, and office development than the Specific Plan, it would generate less demand for retail uses and reduce the less than significant physical urban decay impacts of the Specific Plan.

Aesthetic and Visual Resources

Public Views of Identified Scenic Resources (San Bruno Mountain and Adjacent Ridgelines, San Francisco Bay, and the Brisbane Lagoon)

Within the area east of the Caltrain right-of-way, Reduced Density Development around an operating 45-acre LMF would place approximately 1.0 million s.f. of office development along the south side of Geneva Avenue and west side of Sierra Point Parkway. This development would be subject to EIR mitigation measures that reduce the maximum height of buildings along the west side of the Caltrain rail line and MM AES-1a, which limit the height of buildings within 350 feet of US Highway 101. Compliance with these measures would reduce the impacts of this alternative to less than those of the Specific Plan (less than significant with mitigation incorporated).

Impacts to Scenic Resources

Reduced Density Development around an operating 45-acre LMF would provide the same preservation and improvements of existing scenic resources within the Baylands as the Specific

[409] The City of Brisbane would next be required to approve an updated Housing Element in 2031 for the 2031–2039 period.

Plan. The Visitacion Creek corridor, Icehouse Hill, and the north shore of Brisbane Lagoon would each be improved in the same manner as the Specific Plan, including restoration of wetland and habitat areas, thereby retaining their natural character. This alternative would also extend the San Francisco Bay Trail through Baylands, preserve 100-foot shoreline band areas around the Visitacion Creek corridor and Brisbane Lagoon and provide public access to the Bay. Thus, impacts would be the same as for the Specific Plan (less than significant).

Consistency with Visual Quality-Related Policies and Programs

Reduced Density Development around an operating 45-acre LMF would shift the water recycling facility to the east side of the realigned Tunnel Avenue and require construction of the same retaining wall as for Alternative 1. Reduced Density Development around an operating 45-acre LMF would also be required to be consistent with the same visual-quality-related policies and programs as Specific Plan development, including the findings that are required to be made by the Planning Commission for approval of a design permit. Impacts would thus be similar to the Specific Plan.

Nighttime Lighting

Reduced Density Development around an operating 45-acre LMF would generate nighttime lighting over a smaller, though still broad area that is currently largely dark at night compared to the Specific Plan. This alternative would reduce total building area and reduce some sources of outdoor lighting (e.g., street lighting, surface parking lots). Nighttime lighting of outdoor open space and park areas would remain the same as for the Specific Plan.

This alternative would be required to comply with the same performance standards and EIR mitigation measures as the Specific Plan. Because it would generate nighttime lighting over a slightly smaller area than the Specific Plan while also complying with the same mitigation measures and achieving the same performance standards, this alternative would slightly reduce the less than significant impacts of the Specific Plan.

Glare

While development of 1,800 dwelling units, 4.5 million s.f. of commercial office and 500,000 s.f. of hotel use would reduce the amount of glare-producing reflective building materials on building roofs and façades compared to the Specific Plan, it would nevertheless substantially increase daytime glare, particularly in the early morning and late afternoon hours.

Glare resulting from this alternative could produce nuisance effects within residential areas, classrooms, parks, trails, and playgrounds, as well as adversely affect motorists along US Highway 101, Geneva Avenue, and Bayshore Boulevard by impairing vision, although to a lesser degree than the Specific Plan due to reduced development density. While this alternative would have less glare-producing surface area than the Specific Plan, it would nevertheless

result in a significant glare impact and be required to implement the same mitigation measures. Reduced Density Development around an operating 45-acre LMF would reduce the less than significant with mitigation incorporated impact of the Specific Plan.

Biological Resources

Candidate, Sensitive, and Special-Status Plants, Animals, and Habitats

Reduced Density Development around an operating 45-acre LMF would have the same development footprint within the western portion of the Baylands and require similar movement of soil from the eastern to the western portion of the Baylands to achieve final grades. Thus, similar impacts to existing species and habitats would occur. Because this alternative would provide similar habitat restoration and enhancement improvements as the Specific Plan along Visitacion Creek outside of the 45-acre LMF, along the north shore of the lagoon, and on Icehouse Hill, a similar less than significant with mitigation incorporated impact as the Specific Plan would result.

Wetlands and Non-Wetland Waters Acreage, Functions, and Values

Reduced Density Development around an operating 45-acre LMF would have the same development footprint within the western portion of the Baylands and require similar movement of soil from the eastern to the western portion of the Baylands to achieve final grades. Because this alternative would have similar impacts to wetlands and non-wetland waters and provide similar habitat restoration and enhancement improvements along Visitacion Creek outside of the 45-acre LMF as well as along the north shore of the lagoon, a similar less than significant with mitigation incorporated impact as the Specific Plan would result.

Movement of Fish and Wildlife Species

Trails and recreational improvements on Icehouse Hill would remain unchanged from the Specific Plan. Because a reduced amount of building glass area would result than the Specific Plan, bird strike impacts would be reduced but still require implementation of the same mitigation measures. Thus, impacts and required mitigation would be reduced for this alternative compared to the Specific Plan.

Consistency with Brisbane Municipal Code Chapter 12.12, Private Tree Regulations

Reduced Density Development around an operating 45-acre LMF would be required to comply with the requirements of Brisbane Municipal Code Chapter 12.12. As a result, impacts would be unchanged from those of the Specific Plan.

Consistency with the San Bruno Mountain Habitat Conservation Plan

Because this alternative would provide the same improvements within Icehouse Hill as would the Specific Plan, impacts would be unchanged.

Cultural Resources and Tribal Cultural Resources

Roundhouse and Machinery & Equipment Buildings

Because the development footprint and site grading requirements for the western portion of the site would be unchanged, Reduced Density Development around an operating 45-acre LMF would restore the Roundhouse for adaptive reuse in the same manner as the Specific Plan and be subject to the same mitigation requirements. Development surrounding the Roundhouse and Machinery & Equipment building would be compatible with the historic character of these buildings. Thus, impacts would be similar to the Specific Plan.

Archaeological Resources

Because site grading would not be changed, impacts and resulting mitigation measures would be the same as for the Specific Plan.

Tribal Cultural Resources

Because no tribal cultural resources have been identified within the Baylands, no impacts would result.

Disturbance of Known or Unknown Human Remains

This alternative would cause ground disturbance within the same areas as would Specific Plan development. Should development within the western portion of the Baylands result in fewer buildings to be constructed due to its lower density, less excavation would be required than for the Specific Plan while implementing the same mitigation requirements. Thus, this alternative would reduce the less than significant with mitigation incorporated impact of the Specific Plan.

Transportation

Vehicle Miles Traveled

Reduced Density Development around an operating 45-acre LMF would result in a slight increase in per capita employee VMT by concentrating development within the eastern portion of the Baylands along the Geneva Avenue and Sierra Point Parkway corridors further from transit, even if shuttle services similar to the Specific Plan were to be provided. While the reduced development intensity of this alternative would not likely support the same level of shuttle service as would be provided for Specific Plan development, the availability of transit

service within the western portion of the Baylands combined with the mixed-use character of the alternative and requirements for a transportation demand management plan, VMT generated by Baylands uses would remain less than significant. In addition, this alternative would result in a lesser reduction in regional miles traveled than the Specific Plan but still result in a less than significant impact.

Transit, Bicycle, and Pedestrian Travel Modes

Reduced Density Development around an operating 45-acre LMF would provide a comprehensive system of bicycle and pedestrian facilities within the site and complete the Bay Trail through the eastern portion of the Baylands. Impacts would be similar to those of the Specific Plan.

Hazards to Vehicles, Bicyclists, and Pedestrians

All roadways within the Baylands would be constructed to City standards. Impacts would therefore be similar to the Specific Plan as it is proposed to be mitigated.

Emergency Access

The Specific Plan area, each development district, and each block within the Baylands would be provided with more than one point of access facilitating emergency response. Because the extension of Geneva Avenue over the Caltrain right-of-way to the US 101 freeway and extension of Sierra Point Parkway would be the same as for the Specific Plan, emergency response from the proposed new fire station within the northeastern portion of the site would be similar to the Specific Plan. In addition, because all roadways would be constructed to City standards and this alternative would provide emergency access during flooding events consistent with EIR mitigation requirements, impacts would be similar to the Specific Plan.

Air Quality

Consistency with the 2017 Regional Clean Air Plan

Site grading for Reduced Density Development around an operating 45-acre LMF would be similar to the Specific Plan, would be subject to the same mitigation measures, and therefore would result in similar impacts. This alternative would also have slightly higher per employee VMT but would generate more renewable energy than the Specific Plan. As a result, this alternative would result in similar impacts in relation to consistency with the 2017 Clean Air Plan as the Specific Plan.

Increased Emissions of Non-Attainment Criteria Air Pollutants

Reduced Density Development around an operating 45-acre LMF would require a similar amount of grading as the Specific Plan. This alternative would be subject to the same mitigation measures as the Specific Plan and result in a similar significant unavoidable construction impact.

Reduced Density Development around an operating 45-acre LMF would reduce ease of access to transit east of Caltrain by concentrating office development along the Geneva Avenue and Sierra Point Parkway corridors further from the Caltrain Bayshore station than the Specific Plan. A slight increase in per capita emissions would result. Even though total mobile and area source operational emissions would be reduced compared to the Specific Plan, emissions for this alternative would exceed thresholds and remain significant and unavoidable.

Exposure of Sensitive Receptors to Substantial Pollutant Concentrations

Because Reduced Density Development around an operating 45-acre LMF would require a similar amount of grading, exposure of off-site receptors to pollutant concentrations during site grading activities would be similar to the Specific Plan. This alternative would be subject to the same mitigation measures as the Specific Plan, and result in a similar less than significant with mitigation incorporated impact.

Odors

The potential for odor generation during site grading would be the same as that of the Specific Plan. Reduced Density Development around an operating 45-acre LMF would also move employment-generating uses along Geneva Avenue closer to the on-site water recycling facility than would occur for Specific Plan development. Because the water recycling facility in this alternative would be subject to the same mitigation requirements as the Specific Plan, a similar less than significant with mitigation incorporated impact would occur.

Greenhouse Gas Emissions

Specific Plan Area Greenhouse Gas (GHG) Emissions

Reduced Density Development around an operating 45-acre LMF would generate slightly higher VMT per employee than the Specific Plan by locating development east of Caltrain further from the Bayshore Caltrain station. Reducing Baylands development by 400 dwelling units and 2.5 million s.f. of commercial office use would result in a smaller amount of Baylands-generated GHG emissions than the Specific Plan, thereby reducing the severity of, but not eliminating, its significant unavoidable impact. However, should development of these 400 dwelling units and 2.5 million s.f. of commercial office use occur outside of the Baylands in

other, less transit-oriented locations within the Bay Area, resulting regional GHG emissions could be greater for this alternative than for Specific Plan development.

Effect on Regional GHG Emissions

Because Reduced Density Development around an operating 45-acre LMF development would generate slightly higher VMT per employee than the Specific Plan, per capita employee vehicular travel would increase, resulting in smaller reductions in regional VMT and mobile source GHG emissions as the Specific Plan.

Consistency with GHG Reduction Plans, Policies, Performance Standards, and Regulations

Reduced Density Development around an operating 45-acre LMF would include the same GHG reduction features and mitigation measures as the Specific Plan and would therefore be equally consistent with applicable GHG reduction plans, policies, performance standards, and regulations.

Energy Resources

Wasteful, Inefficient, or Unnecessary Use of Energy

By reducing the total number of dwelling units and commercial square footage within the Baylands and expanding the Specific Plan's 55-acre solar field, this alternative would generate more renewable energy while reducing Specific Plan area consumption. On-site buildings would meet Tier 2 CALGreen Standards. As a result, Reduced Density Development around an operating 45-acre LMF would reduce the Specific Plan's less than significant impact.

Consistency with Applicable Energy Reduction Programs, Plans, Ordinances, and Policies

In addition to implementing all of the energy efficiency features of the Specific Plan, this alternative would generate more renewable energy while reducing Specific Plan area consumption. Reduced Density Development around an operating 45-acre LMF would, therefore, be consistent with applicable energy reduction programs, plans, ordinances, and policies.

Noise and Vibration

Temporary Increase in Ambient Noise

The extent of site grading required for Reduced Density Development around an operating 45-acre LMF would be similar to the Specific Plan, generating similar construction noise. This alternative would likely result in fewer buildings requiring pile driving and move construction of some buildings east of Caltrain and further from sensitive receptors. Development in this

alternative would be subject to the same mitigation measures as the Specific Plan and would reduce but not avoid its significant impacts.

Traffic Noise Increase

Reduced Density Development around an operating 45-acre LMF would generate less traffic than the Specific Plan. As a result, the amount of traffic along area roadways would increase to a lesser degree and reduce the Specific Plan's impacts. Such impacts, although reduced, would remain significant and unavoidable.

Permanent Increase in Ambient Noise

Reduced Density Development around an operating 45-acre LMF would generate noise from the same stationary sources as the Specific Plan. Due to the logarithmic scale used to measure noise, the reduced development intensity of this alternative would not likely be sufficient to substantially reduce permanent increases in ambient noise compared to the Specific Plan. Reduced Density Development around an operating 45-acre LMF would be subject to the same performance standards and mitigation measures as the Specific Plan and would be required to meet the same comply with City noise ordinance requirements. Impacts would therefore be similar to the Specific Plan (significant and unavoidable).

Exacerbate Land Use / Noise Incompatibilities by Placing People in High Noise Areas

Because the tallest buildings within the western portion of the Baylands are those closest to the Caltrain rail line, the number of dwelling units and square footage of commercial office development adjacent to the Caltrain right-of-way would decrease while commercial office development proximity to the US 101 freeway would increase. Overall, there would be fewer sensitive receptors, particularly residents, within high noise areas in the alternative than in the Specific Plan. Thus, impacts for this alternative would be less than for the Specific Plan.

Groundborne Vibration

The extent of site grading required for Reduced Density Development around an operating 45-acre LMF would be similar to the Specific Plan, generating similar vibration impacts. This alternative would likely result in fewer buildings requiring pile driving and move construction of some buildings east of Caltrain and further from sensitive receptors. Development of this alternative would be subject to the same mitigation measures as the Specific Plan, resulting in reduced impacts.

Exacerbate Human Annoyance or Hazards by Placing Buildings in High Groundborne Vibration Areas

Because the tallest buildings within the western portion of the Baylands are those closest to the Caltrain rail line, the number of dwelling units and square footage of commercial office development adjacent to the Caltrain right-of-way would decrease while commercial office development proximity to the US 101 freeway would increase. Thus, impacts for this alternative would be similar to the Specific Plan.

Hazards and Hazardous Materials

Risks Involved in Transport, Use, Disposal, and Management of Hazardous Materials

Demolition of older buildings along Industrial Way that potentially contain asbestos or lead-based paints would be the same for this alternative as for the Specific Plan. In addition, the types of uses proposed for this alternative would be the same as the Specific Plan, albeit with a reduced development intensity. The potential for a release of hazardous materials due to the transport, use, disposal, or management of hazardous materials, whether resulting from routine activities or an accident, to adversely affect a substantial number of people would be reduced compared to the Specific Plan due to reduced development intensity. In addition, the Baylands development in this alternative would be subject to the same extensive set of regulations designed to protect the public and environment from such a release of hazardous materials. Thus, impacts would be less than those of the Specific Plan.

Create a Health Hazard for an Existing or Planned School Site Due to Release of Hazardous Materials or Proximity of Hazardous Conditions

The location of a school site within the Baylands in relation to locations of hazardous materials sites and emitters would be the same as for the Specific Plan. Thus, the impacts of this alternative would be the same.

Development on a Property That Is Included on a List of Hazardous Materials Sites

Various portions of the Baylands and adjacent areas, including the former Brisbane Landfill, OU-SM, and OU-2, are included on databases listing hazardous materials pursuant to Government Code Section 65962.5. Within the western portion of the Baylands, development would occur within the OU-SM and OU-2 following site remediation pursuant to the regulatory authority of the San Francisco Bay RWQCB and DTSC.

Reduced Density Development around an operating 45-acre LMF would reduce the amount of, but not eliminate, the campus office uses proposed by the Specific Plan within the footprint of the former Brisbane Landfill, which is included on databases listing hazardous materials pursuant to Government Code Section 65962.5. Final closure pursuant to Title 27 requirements

would be required for the development of this alternative as it would be for the Specific Plan. Development throughout the Baylands would be subject to the same requirements as the Specific Plan and would reduce the less than significant impact of the Specific Plan.

Create an Airport Safety Hazard or Expose People to Excessive Noise of Aircraft Operations

Since none of the Specific Plan area is subject to safety hazards of excessive noise due to aircraft operations, Reduced Density Development around an operating 45-acre LMF would have similar impacts as the Specific Plan.

Emergency Preparedness and Response

Development would provide the same regional roadway connections and meet the same access requirements for police and fire service response as the Specific Plan. Thus, impacts would be the same as for the Specific Plan.

Hydrology and Water Quality

Protection of Water Quality

The extent of site grading required for Reduced Density Development around an operating 45-acre LMF would be similar to the Specific Plan, including a similar high potential for erosion and siltation and for release of pollutants during grading and construction. Because this alternative would concentrate development east of Caltrain along Geneva Avenue and Sierra Point Parkway, it would have a more compact roadway system with less potential for release of urban pollutants to the Brisbane Lagoon and to San Francisco Bay via Visitacion Creek than the Specific Plan. Because the potential for urban pollutants to enter the Bay would remain significant, this alternative would implement the same Best Management Practices outlined in required NPDES permits, SWPPPs and the requirements of NPDES Provision C.3 in combination with the same mitigation measures as the Specific Plan. Impacts would therefore be similar to those of the Specific Plan.

Groundwater Recharge and Sustainable Management

Reduced Density Development around an operating 45-acre LMF would reduce the site's impervious surface area compared to the Specific Plan, and would therefore not interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level that could impede sustainable management of a groundwater basin or cause subsidence for the same reasons as the Specific Plan. In addition, as demonstrated in the Water Supply Assessment prepared by Cal Water, Baylands development would have no effect on groundwater pumping within South San Francisco.

Thus, impacts would be similar to those of the Specific Plan.

Flood Hazards

By concentrating development east of Caltrain along Geneva Avenue and Sierra Point Parkway, this alternative would not reduce impermeable surface area or generate a smaller increase in stormwater runoff than the Specific Plan due to requirements for construction of an impermeable cap within the landfill. Reduced Density Development around an operating 45-acre LMF would comply with the same flood protection standards and mitigation measures as the Specific Plan. Impacts would be similar to the Specific Plan.

Release of Pollutants Due to Flood, Emergent Groundwater, Tsunami, or Seiche

The Specific Plan area is not located within a tsunami hazard zone and the required on-site water storage tank facilities would be designed and constructed to withstand anticipated oscillations in water surface caused by an earthquake. Further, reduced density of this alternative would have a negligible effect in relation to the risk of release of pollutants attributable to inundation since potential pollutants would not be present at the ground surface and no facilities storing hazardous materials would be located downstream of Baylands water storage facilities. In addition, this alternative would be subject to the same less than significant potential for emergent groundwater as the Specific Plan. Thus, impacts would be similar to the Specific Plan.

Geology, Soils, and Seismicity

Fault Rupture

Because there are no known active or potentially active fault traces across the Baylands and the site is not located within an Alquist-Priolo Earthquake Fault Zone, no impact would occur.

Seismic Ground Shaking

This alternative would be subject to the same combination of CBC compliance as the Specific Plan, which would provide an appropriate level of safety and reduce hazards from strong seismic ground shaking. Seismic ground shaking would affect fewer people and less development would be at risk than the Specific Plan, resulting in reduced impacts.

Liquefaction and Seismic-Related Ground Failure

Because of the presence of high groundwater and loose, unconsolidated soils underlying the Specific Plan area, this alternative would be subject to the same liquefaction hazards as the Specific Plan. Reduced Density Development around an operating 45-acre LMF would be

required to conform to the same site-specific foundation design parameters and requirements as the Specific Plan. Thus, impacts would be similar to those of the Specific Plan.

Slope Stability

The amount of grading needed for Reduced Density Development around an operating 45-acre LMF would be similar to the Specific Plan and include the same embankments for the Geneva Avenue bridge over Caltrain as the Specific Plan. Site-specific development projects would be required to comply with the same development requirements, including compliance with the most recent California Building Code requirements for slope stability. The combination of compliance with Building Code requirements and EIR Mitigation Measures would result in a similar less than significant with mitigation incorporated impact as the Specific Plan.

Expansive Soils and Soil Corrosivity

Wherever Bay Mud is present, such as along Bayshore Boulevard and during construction of deep foundations, corrosive and expansive subsurface soils are likely to be encountered. Site-specific development projects for this alternative would be designed and constructed to comply with the requirements of final site-specific design-level geotechnical reports, which would ensure appropriate design and construction to mitigate soil corrosivity and expansive soils hazards for each building and infrastructure project. Compliance with the CBC in combination with reducing the number of buildings within the eastern portion of the Baylands would reduce hazards from soil corrosivity and expansive soils compared to the less than significant impacts of the Specific Plan.

Paleontological Resources

The only deep excavations that would disturb significant paleontological resources within the Colma or Merced Formations would be pile foundation installation. Because installation of pile foundations would render any potentially valuable specimens irretrievable, such installation is not typically considered to cause significant impacts. This alternative would also have the same unlikely potential that excavations for other construction activities would be deep enough to encounter paleontological resources as the Specific Plan. Because this alternative would have the same potential for such excavations and would be subject to the same mitigation measures, impacts would be unchanged from the Specific Plan.

Use of Septic Tanks or Alternative Wastewater Disposal Systems

All Baylands development would be connected to a municipal wastewater system and neither septic tanks nor alternative wastewater disposal systems would be used.

Utilities, Service Systems, and Water Supply

Water Supply

Reduced Density development around an operating 45-acre LMF would consume less water than the Specific Plan. Because it would generate less wastewater, this alternative would also generate less recycled water than the Specific Plan, unless sewage generated by the City and Bayshore Sanitary District were to be recycled on-site. As a result, water supply impacts of this alternative would be similar to the Specific Plan.

Construction and Improvement of Utility and Service System Facilities

Demolition, grading, and construction of utility facilities would be the same as for the Specific Plan and result in the same less than significant impacts.

Consistency with Solid Waste Management Policies

Because this alternative would generate the same amount of solid waste on a per unit basis, be subject to the same mitigation measures, and achieve the same waste diversion rate as the Specific Plan, impacts would be the same as the Specific Plan.

Landfill Capacity

Reduced Density Development around an operating 45-acre LMF would generate the same amount of solid waste on a per unit basis, be subject to the same diversion programs, and achieve the same waste diversion rate as the Specific Plan. By reducing the amount of development, this alternative would reduce total solid waste generation and therefore also reduce the Specific Plan's less than significant impact on landfill capacity.

Public Services and Facilities

Adverse Physical Environment Effects Associated with Construction or Improvements of Fire Protection, Police, School, and Other Public Facilities

Demolition, grading, and construction of fire protection, police, school, and other facilities to serve Baylands development would reduce demand for police, fire protection, and schools, reducing the Specific Plan's less than significant impact. This alternative would also reduce demands and be subject to the same mitigation measures as the Specific Plan in relation to libraries and the City's corporation yard, thereby reducing the Specific Plan's less than significant with mitigation incorporated impact.

Recreation Resources

Physical Deterioration of a Park or Recreational Facility

Reduced Density Development around an operating 45-acre LMF would retain the same ratio of improved parkland to population as the Specific Plan. Thus, parkland provided by this alternative would exceed the 5.03 acres per 1,000 population of parkland currently available to Brisbane residents to same degree as the Specific Plan on a phased basis and not cause any physical deterioration of existing parks and recreational facilities within the City. Because population growth would be less than the Specific Plan, this alternative would have a significant although proportionately smaller impact on existing community facilities. Reduced Density Development around an operating 45-acre LMF would be subject to a proportionately smaller mitigation requirement, resulting in a similar impact with mitigation incorporated as the Specific Plan.

Physical Deterioration of Candlestick Point Windsurfing Resources

Although Reduced Density Development around an operating 45-acre LMF would place buildings along Sierra Point Parkway, such buildings would be limited to a maximum 80-foot height within 300 feet of the US 101 freeway as would Specific Plan development. As a result, Reduced Density Development around an operating 45-acre LMF would have a similar less than significant effect on windsurfing resources as would the Specific Plan.

Wildland Fire

Exacerbate Fire Hazards

Reduced Density Development around an operating 45-acre LMF would result in similar construction activities within and adjacent to combustible vegetation and would reduce population/employment growth compared to the Specific Plan. Wildland fire hazard impacts would be less than the Specific Plan.

Evaluation of Alternative 5, Reduced Density Development Around an Operating 45-Acre LMF in Relation to Project Objectives

Reducing the intensity of Baylands development throughout the Baylands, including reducing development east of Caltrain to approximately 1.0 million s.f. along Geneva Avenue and Sierra Point Parkway, would generally implement the Brisbane General Plan, including GP-1-18 and Measure JJ. In addition, this alternative would achieve each of the project's overarching and other objectives (see **Table 8-11**).

Table 8-11: Evaluation of Alternative 5, Reduced Density Development Around an Operating 45-Acre LMF in Relation to Project Objectives

Project Objectives	Extent to Which Alternative 2, Baylands (Reduced Density) Development Around an Operating 45-Acre LMF, Would Achieve Objectives
The underlying purpose of the Baylands Specific Plan and the development it permits is to:	
Provide for the productive reuse of this brownfield site in a manner that eliminates ongoing ecological damage and ensures the safety of all who will use the Baylands.	Reduced Density Development around an operating 45-acre LMF would require site remediation and Title 27 landfill closure prior to development. This alternative would eliminate ongoing ecological damage, provide for productive reuse of the Baylands, and ensure the safety of all who will use the site.
Project Objectives for the Baylands are to:	
• Preserve and enhance the site's natural resources and historic features within a system of permanent open space that: o Restores and enhances wetlands and natural habitats within the Baylands; o Promotes visual connectivity between the Baylands, San Bruno Mountain, and San Francisco Bay; o Adapts to climate change and sea level rise; and o Provides a range of recreational opportunities and open space experiences for Baylands residents and workers as well as for the larger Brisbane community.	This alternative would restore and enhance habitats within Visitacion Creek, along the north shore of the lagoon, and on Icehouse Hill. This alternative would also restore and provide for adaptive reuse of the historic Roundhouse. By reducing the overall amount of development compared to the Specific Plan, this alternative would maintaining a lower vertical profile than the Specific Plan. Baylands Reduced Density development around an operating 45-acre LMF would protect development from adverse effects of climate change and sea level rise through an adaptation strategy that would provide for restoration of wetlands and non-wetland waters within Visitacion Creek and along the north shore of the lagoon to adapt naturally to sea level rise and increasing tidal influence.
• Implement the City's Housing Element by providing a mix of housing types, sizes, and densities that contributes to local and regional housing needs for all economic segments of the community, as well as for families and individuals of all ages and physical abilities.	Reduced Density Development around an operating 45-acre LMF would provide a sufficient mix and intensity of residential building types to provide opportunities for the development of housing for all economic segments of the community in accordance with the City's Housing Element. By reducing the number of dwelling units permitted within the Baylands, this alternative would make a smaller contribution to meeting future housing needs for the next required update of the City's Housing Element addressing need for the 2031-2039 Housing Element period than would the Specific Plan.
• Enhance Brisbane's economic vitality by ensuring that Baylands development will be revenue positive to the City.	Compared to the Specific Plan, Reduced Density Development around an operating 45-acre LMF would reduce residential development by 18.2 percent and commercial office development by 30.8 percent, while retaining the same amount of hotel development as the Specific Plan. This alternative would be revenue positive for the City although to a lesser degree than the Specific Plan.
• Establish the Baylands as a leading model of sustainable development consistent with the principles of the City's Sustainability Framework for the Baylands (Integral Group 2015).	Reduced Density Development around an operating 45-acre LMF would include all of the sustainability features set forth in the Specific Plan and EIR mitigation measures.
• Attract office-based employment to the Baylands that provides a broad range of high-paying jobs as well as training and advancement opportunities for the community's young adults.	While this alternative would produce a lower jobs-to-housing ratio than the Specific Plan, Reduced Density Development around an operating 45-acre LMF would generate a mix of on-site employment at a sufficient scale to achieve this objective, although not to the same extent as the Specific Plan.

Project Objectives	Extent to Which Alternative 2, Baylands (Reduced Density) Development Around an Operating 45-Acre LMF, Would Achieve Objectives
• Enable residents, workers, and visitors to be less dependent on cars.	This alternative would improve access to the Bayshore Caltrain Station. This alternative would place employee-generating development east of Caltrain along Sierra Point Parkway to take advantage of Bay views, reducing ease of access for employees in the Campus East District to the Caltrain station compared to the Specific Plan.

Feasibility of Alternative 5, Reduced Density Development Around an Operating 45-Acre LMF, and Overall Conclusion

Reduced Density Development around an operating 45-acre LMF would be consistent with the Brisbane General Plan while reducing the overall development intensity of the Specific Plan. Concentrating development could reduce the cost for on-site infrastructure required to support 1,800 dwelling units, 4.5 million s.f. of commercial, and 500,000 s.f. of hotel use. As such, Alternative 5, Reduced Density Development Around an Operating 45-Acre LMF, would be both reasonable and potentially feasible per the requirements of CEQA Guidelines Section 15126.6(a).

Overall, Reduced Density Development around an operating 45-acre LMF would reduce but not avoid the significant unavoidable impacts of the Baylands 2025 Specific Plan project.

c. Alternative 6: Reduced Density, Balanced Commercial

The purpose of this alternative is to determine whether the significant impacts of Specific Plan development could be reduced through a combination of (1) decreasing the overall amount of residential and commercial development within the Baylands and (2) a more balanced distribution of commercial development within the western and eastern portions of the Baylands.[410]

Land Use and Planning Policies

Physical Division of an Existing Community

Reduced Density, Balanced Commercial development would include the same construction projects affecting area roadways as the Specific Plan would be subject to the same requirements and mitigation measures, and would therefore result in the same construction impacts as the Specific Plan. Because this alternative would retain the same development footprint, same open space areas, and same roadway and non-motorized transportation system as the Specific Plan,

[410] The proportional distribution of commercial development between the western and eastern portions of the Baylands is similar to the distribution of commercial, retail, and R&D uses in the previously proposed 2011 Specific Plan.

the Reduced Density, Balanced Commercial development would have similar less than significant impacts in relation to dividing an existing community as the proposed Specific Plan.

Consistency with Local and Regional Plans

Reduced Density, Balanced Commercial development would be consistent with the General Plan's development intensity standards for the Baylands. Development of 1,800 dwelling units is at the low end of the range for housing specified in the General Plan, and approximately 18 percent below that of the Baylands Specific Plan, which represents the General Plan's maximum permitted number of dwelling units. Development of 4.5 million s.f. of commercial/office space would be consistent with the General Plan and would be approximately 30.7 percent less than the 6.5 million s.f. proposed in the Baylands Specific Plan. The same additional 500,000 s.f. of hotel development as the Specific Plan would also be consistent with the General Plan maximum permitted development. Consistency with specific General Plan policies and resulting environmental effects of inconsistencies would be the same as the Specific Plan.

Population and Housing

Induce Substantial Unplanned Growth

Reduced Density, Balanced Commercial development provides for the development of 1,800 dwelling units, which would result in approximately 4,015 residents within the Baylands compared to the 4,905 Baylands residents resulting from Specific Plan buildout. This reduced housing and population is consistent with the Brisbane General Plan, which provides for 1,800 to 2,200 dwelling units within the Baylands. Reducing commercial office space within the Baylands to 4.5 million s.f. with an additional 500,000 s.f. of hotel use would reduce Baylands employment from 19,480 to 16,365 jobs, which would also be consistent with the Brisbane General Plan. Thus, population and employment growth associated with this alternative would be considered to be *planned* growth and impacts would be the same as the Specific Plan (less than significant).

Displacement of Existing Housing or Businesses

Because Reduced Density, Balanced Commercial development involves development of the same footprint, the same 231,400 s.f. of existing industrial businesses along Industrial Way would be displaced, resulting in the same less than significant impact.

Housing for all Economic Segments of the Community

Reduced Density, Balanced Commercial development proposes 1,800 dwelling units, consistent with the Baylands residential development assumption set forth in the City's adopted Housing Element. This alternative would, therefore, meet City objectives to provide opportunities for the development of housing for all segments of the community within the 2023-2031 Housing

Element. By reducing Baylands housing by 400 units compared to the Specific Plan, this alternative would reduce opportunities for the development of housing for subsequent Housing Element updates, which are required on an 8-year basis.[411]

Urban Decay

Because housing would provide less residential, retail, and office development than the Specific Plan, it would generate less demand for retail uses and reduce the less than significant urban decay impacts of the Specific Plan.

Aesthetic and Visual Resources

Public Views of Identified Scenic Resources (San Bruno Mountain and Adjacent Ridgelines, San Francisco Bay, and the Brisbane Lagoon)

Within the area east of the Caltrain right-of-way, Reduced Density, Balanced Commercial development would reduce overall development by approximately 600,000 s.f. This development would be subject to EIR mitigation measures that reduce the maximum height of buildings along the west side of the Caltrain rail line and limit the height of buildings within 350 feet of US Highway 101. Compliance with these measures would reduce the impacts of this alternative to less than those of the Specific Plan (less than significant with mitigation incorporated).

Impacts to Scenic Resources

Reduced Density, Balanced Commercial development would provide the same preservation and improvements of existing scenic resources within the Baylands as the Specific Plan. The Visitacion Creek corridor, Icehouse Hill, and the north shore of Brisbane Lagoon would each be improved in the same manner as would the Specific Plan, including restoration of wetland and habitat areas, which would thereby retain their natural character. This alternative would also extend the San Francisco Bay Trail through Baylands, preserve 100-foot shoreline band areas around the Visitacion Creek corridor and Brisbane Lagoon and provide public access to the Bay. Thus, impacts would be the same as for the Specific Plan (less than significant).

Consistency with Visual Quality-Related Policies and Programs

Reduced Density, Balanced Commercial development would have the same development footprint and open space areas as the Specific Plan. This alternative would also be required to be consistent with the same visual quality-related policies and programs as Specific Plan

[411] The City of Brisbane would next be required to approve an updated Housing Element in 2031 for the 2031–2039 period.

development, including the findings that are required to be made by the Planning Commission for approval of a design permit. Impacts would thus be similar to the Specific Plan.

Nighttime Lighting

Reduced Density, Balanced Commercial development would generate nighttime lighting over the same broad area that is currently largely dark at night as the Specific Plan. This alternative would reduce total building area. Nighttime lighting of outdoor open space and park areas would remain the same as for the Specific Plan. This alternative would be required to comply with the same performance standards and EIR mitigation measures as the Specific Plan. Because it would generate nighttime lighting over a similar area as the Specific Plan while also complying with the same mitigation measures and achieving the same performance standards, this alternative would have similar impacts as the Specific Plan.

Glare

Reduced Density, Balanced Commercial development would reduce the amount of glare-producing reflective building materials on building roofs and façades as the Specific Plan. Nevertheless, 1,800 dwelling units, 4.5 million s.f. of commercial office space, and 500,000 s.f. of hotel use would substantially increase daytime glare, particularly in the early morning and late afternoon hours.

Glare resulting from this alternative could produce nuisance effects within residential areas, classrooms, parks, trails, and playgrounds, as well as adversely affect motorists along US Highway 101, Geneva Avenue, and Bayshore Boulevard by impairing vision, although to a lesser degree than the Specific Plan due to reduced development density. While this alternative would have less glare-producing surface area than the Specific Plan, it would nevertheless result in a significant glare impact and be required to implement the same mitigation measures as the Specific Plan. Reduced Density, Balanced Commercial development would reduce the less than significant impacts of the Specific Plan with implementation of mitigation.

Biological Resources

Candidate, Sensitive, and Special-Status Plants, Animals, and Habitats

Reduced Density, Balanced Commercial development would have the same development footprint within the western portion of the Baylands and require the same movement of soil to be transported from the eastern to the western portion of the Baylands to achieve final grades. Thus, the same impacts to existing species and habitats would occur. Because this alternative would provide the same habitat restoration and enhancement improvements as the Specific Plan along Visitacion Creek, the north shore of the lagoon, and on Icehouse Hill, and would be subject to the same mitigation measures, a similar less than significant impact as the Specific Plan would result.

Wetlands and Non-Wetland Waters Acreage, Functions, and Values

Reduced Density, Balanced Commercial development would have the same development footprint and require the same movement of soil to be transported from the eastern to the western portion of the Baylands to achieve final grades. Thus, the same impacts to wetlands and non-wetland waters would occur as the Specific Plan. Because this alternative would provide the same habitat restoration and enhancement improvements as the Specific Plan along Visitacion Creek, the north shore of the lagoon, and on Icehouse Hill, and would be subject to the same mitigation measures, a similar less than significant impact as the Specific Plan would result.

Movement of Fish and Wildlife Species

Trails and recreational improvements on Icehouse Hill would remain unchanged from the Specific Plan. Because a reduced amount of building glass area would result than the Specific Plan, bird strike impacts would be reduced although implementation of the same mitigation measures would be required. Thus, impacts and required mitigation would be reduced for this alternative compared to the Specific Plan.

Consistency with Brisbane Municipal Code Chapter 12.12, Private Tree Regulations

Reduced Density, Balanced Commercial development would be required to comply with the requirements of Brisbane Municipal Code Chapter 12.12. As a result, impacts would be the same as the Specific Plan.

Consistency with the San Bruno Mountain Habitat Conservation Plan

Because this alternative would provide the same improvements within Icehouse Hill as would the Specific Plan, impacts would be the same.

Cultural and Tribal Cultural Resources

Roundhouse and Machinery & Equipment Buildings

Because the development footprint and site grading requirements for the western portion of the site would be unchanged, Reduced Density, Balanced Commercial development would restore the Roundhouse for adaptive reuse in the same manner as the Specific Plan and be subject to the same mitigation requirements. Development surrounding the Roundhouse and Machinery & Equipment building would also be compatible with the historic character of these buildings. Thus, impacts would be similar to the Specific Plan.

Archaeological Resources

Because site grading would not be changed, impacts and resulting mitigation measures would be the same as for the Specific Plan.

Tribal Cultural Resources

Because no tribal cultural resources have been identified within the Baylands, no impacts would result.

Disturbance of Known or Unknown Human Remains

This alternative would cause ground disturbance within the same areas as would Specific Plan development. Should fewer buildings be constructed due to this alternative's lower density, less excavation would be required than for the Specific Plan while complying with the same mitigation requirements as the Specific Plan. Thus, impacts would be reduced from the less than significant impacts of the Specific Plan.

Transportation

Vehicle Miles Traveled

Reduced Density, Balanced Commercial development would result in a slight increase in per capita employee VMT by shifting some commercial development from the western to the eastern portion of the Baylands, which would slightly increase average distances to the Bayshore Caltrain station even if shuttle services similar to the Specific Plan were to be provided. While the reduced development intensity of this alternative would not likely support the same level of shuttle service as would the Specific Plan, the availability of transit service within the western portion of the Baylands combined with the mixed-use character of the alternative and requirements for a transportation demand management plan, VMT would remain less than significant. In addition, this alternative would result in a lesser reduction in regional miles traveled than the Specific Plan but still cause a less than significant impact.

Transit, Bicycle, and Pedestrian Travel Modes

Reduced Density, Balanced Commercial development would provide a comprehensive system of bicycle and pedestrian facilities within the site and complete the Bay Trail through the eastern portion of the Baylands. Improving the balance of commercial development between the western and eastern portion of the Baylands would shift some office space further from the Bayshore Caltrain station, resulting in a slight reduction in per capita employee use of transit.

Hazards to Vehicles, Bicyclists, and Pedestrians

All roadways within the Baylands would be constructed to City standards. Impacts would therefore be similar to the Specific Plan.

Emergency Access

The Specific Plan area, each development district, and each block within the Baylands would be provided with more than one point of access, facilitating emergency response. Because the extension of Geneva Avenue over the Caltrain right-of-way to the US 101 freeway and extension of Sierra Point Parkway would remain part of the Specific Plan, emergency response from the proposed new fire station within the northeastern portion of the site would be similar to the Specific Plan. In addition, because all roadways would be constructed to City standards and this alternative would provide emergency access during flooding events consistent with EIR mitigation requirements, impacts would be similar to the Specific Plan.

Air Quality

Consistency with the 2017 Regional Clean Air Plan

Site grading for the Reduced Density, Balanced Commercial development would be similar to the Specific Plan, be subject to the same mitigation measures, and therefore result in similar impacts as the Specific Plan. This alternative would also have slightly higher per employee VMT but would include the same features and be subject to the same mitigation measures as the Specific Plan. This alternative would thus have similar impacts in relation to consistency with the 2017 Clean Air Plan.

Increased Emissions of Non-Attainment Criteria Air Pollutants

Reduced Density, Balanced Commercial development would require a similar amount of grading as the Specific Plan. This alternative would be subject to the same mitigation measures as the Specific Plan and result in a similar significant unavoidable construction impact.

A slight increase in per capita employee emissions would result due to shifting some office development to the eastern portion of the Baylands away from the Bayshore Caltrain station. The significant unavoidable construction impact associated with site grading would remain. Even though total mobile and area source operational emissions would be reduced compared to the Specific Plan, emissions for this alternative would exceed thresholds and remain significant and unavoidable.

Exposure of Sensitive Receptors to Substantial Pollutant Concentrations

Because Reduced Density, Balanced Commercial development would require a similar amount of grading as the Specific Plan, exposure of off-site receptors to pollutant concentrations during

site grading activities would be similar to the Specific Plan. This alternative would be subject to the same mitigation measures as the Specific Plan, and result in a similar impact.

Odors

The potential for odor generation during site grading would be the same as that of the Specific Plan. Reduced Density, Balanced Commercial development would also move some employment-generating uses closer to the on-site water recycling facility than would occur for Specific Plan development. Because the water recycling facility would be subject to the same mitigation requirements as for the Specific Plan, a similar less than significant impact would occur.

Greenhouse Gas Emissions

Specific Plan Area Greenhouse Gas (GHG) Emissions

Reduced Density, Balanced Commercial development would generate slightly higher VMT per employee than the Specific Plan by shifting some office development east of the Caltrain right-of-way further from the Bayshore Caltrain station. Reducing Baylands development by 400 dwelling units and 2.5 million s.f. of commercial office use would reduce Baylands-generated GHG emissions compare to the Specific Plan, thereby reducing but not eliminating the severity of its significant unavoidable impact.

Effect on Regional GHG Emissions

Because Reduced Density, Balanced Commercial development would generate slightly higher VMT per employee than the Specific Plan, per capita employee vehicular travel would increase, resulting in smaller reductions in regional VMT and mobile source GHG emissions as the Specific Plan.

Consistency with GHG Reduction Plans, Policies, Performance Standards, and Regulations

Reduced Density, Balanced Commercial development would include the same GHG reduction features and mitigation measures as the Specific Plan and would therefore be equally consistent with applicable GHG reduction plans, policies, performance standards, and regulations.

Energy Resources

Wasteful, Inefficient, or Unnecessary Use of Energy

By reducing the total amount of development, this alternative would generate a greater proportion of the Baylands' energy demand on-site than would the Specific Plan. On-site

buildings would meet Tier 2 CALGreen Standards. As a result, Reduced Density, Balanced Commercial development would reduce the Specific Plan's less than significant impact.

Consistency with Applicable Energy Reduction Programs, Plans, Ordinances, and Policies

In addition to implementing all of the energy efficiency features of the Specific Plan, this alternative would generate a greater proportion of the Baylands' energy demand on-site than would the Specific Plan. Reduced Density, Balanced Commercial development would, therefore, be consistent with applicable energy reduction programs, plans, ordinances, and policies.

Noise and Vibration

Temporary Increase in Ambient Noise

The extent of site grading required for Reduced Density, Balanced Commercial development would be similar to the Specific Plan, generating similar construction noise. This alternative would move construction of some office buildings east of Caltrain further from sensitive receptors. Development in this alternative would be subject to the same mitigation measures as the Specific Plan and thereby result in less severe significant and unavoidable impacts compared to the Specific Plan.

Traffic Noise Increase

Reduced Density, Balanced Commercial development would generate less traffic than the Specific Plan. As a result, the amount of traffic along area roadways would increase to a lesser degree and reduce the Specific Plan's impacts. Such impacts, although reduced, would remain significant and unavoidable.

Permanent Increase in Ambient Noise

Reduced Density, Balanced Commercial development would generate noise from the same stationary sources. Due to the logarithmic scale used to measure noise, reducing development intensity would not likely be sufficient to substantially reduce permanent increases in ambient noise compared to the Specific Plan. This alternative would be subject to the same performance standards and mitigation measures as the Specific Plan and would be required to comply with City noise ordinance requirements. Impacts would therefore be similar to those of the Specific Plan (significant and unavoidable).

Exacerbate Land Use / Noise Incompatibilities by Placing People in High Noise Areas

Because the tallest buildings proposed within the western portion of the Baylands are those closest to the Caltrain rail line, the number of dwelling units and square footage of commercial

office development adjacent to the Caltrain right-of-way would decrease while commercial office development proximity to the US 101 freeway would increase. Overall, there would be fewer sensitive receptors, particularly residents, within high noise areas in the alternative than in the Specific Plan. Thus, impacts for this alternative would be less than for the Specific Plan.

Groundborne Vibration

The extent of site grading required for Reduced Density, Balanced Commercial development would be similar to the Specific Plan, generating similar vibration impacts. This alternative would likely result in fewer buildings requiring pile driving and move construction of some buildings east of Caltrain further from sensitive receptors. Development in this alternative would be subject to the same mitigation measures as the Specific Plan, resulting in reduced impacts.

Exacerbate Human Annoyance or Hazards by Placing Buildings in High Groundborne Vibration Areas

Because the tallest buildings within the western portion of the Baylands would be those closest to the Caltrain rail line, the number of dwelling units and square footage of commercial office development adjacent to the Caltrain right-of-way would decrease while commercial office development proximity to the US 101 freeway would increase. Thus, impacts for this alternative would be similar to the Specific Plan.

Hazards and Hazardous Materials

Risks Involved in Transport, Use, Disposal, and Management of Hazardous Materials

Demolition of older buildings along Industrial Way that potentially contain asbestos or lead-based paints would be the same for this alternative as for the Specific Plan. In addition, the types of uses proposed for this alternative would be the same as the Specific Plan, albeit with a reduced development intensity. The potential for a release of hazardous materials due to the transport, use, disposal, or management of hazardous materials, whether resulting from routine activities or an accident, to adversely affect a substantial number of people would be reduced compared to the Specific Plan due to reduced development intensity. In addition, the Baylands development in this alternative would be subject to the same extensive set of regulations designed to protect the public and environment from such a release of hazardous materials. Thus, impacts would be less than those of the Specific Plan.

Create a Health Hazard for an Existing or Planned School Site Due to Release of Hazardous Materials or Proximity of Hazardous Conditions

The location of a school site within the Baylands in relation to locations of hazardous materials sites and emitters would be the same as for the Specific Plan. Thus, the impacts of this alternative would be the same as for the Specific Plan.

Development on a Property that is Included on a List of Hazardous Materials Sites

Various portions of the Baylands and adjacent areas, including the former Brisbane Landfill, OU-SM, and OU-2, are included on databases listing hazardous materials pursuant to Government Code Section 65962.5. Within the western portion of the Baylands, a reduced amount of development would occur within the OU-SM and OU-2 following site remediation pursuant to the regulatory authority of the San Francisco Bay RWQCB and DTSC. Within the eastern portion of the Baylands, a reduced amount of development would occur following final landfill closure pursuant to Title 27 requirements.

Development throughout the Baylands would be subject to the same General Plan requirements as the Specific Plan and would reduce the less than significant impact of the Specific Plan.

Create an Airport Safety Hazard or Expose People to Excessive Noise of Aircraft Operations

Since none of the Specific Plan area is subject to safety hazards of excessive noise due to aircraft operations, Reduced Density, Balanced Commercial development would have no impact in relation to airport operations.

Emergency Preparedness and Response

Development would provide the same regional roadway connections and meet the same access requirements for police and fire service response as the Specific Plan. Thus, impacts would be similar to the Specific Plan.

Hydrology and Water Quality

Protection of Water Quality

The extent of site grading required for Reduced Density, Balanced Commercial development would be similar to the Specific Plan, including a similar high potential for potential for erosion and siltation and release of pollutants during grading and construction. Because this alternative would have reduced development intensity, smaller development footprint, and fewer streets east of Caltrain, the potential for release of urban pollutants to the Brisbane Lagoon and to San Francisco Bay would be less than the Specific Plan. Because the potential for urban pollutants to enter the Bay would remain significant, this alternative would implement the same Best Management Practices outlined in required NPDES permits, SWPPPs and the requirements of

NPDES Provision C.3 in combination with the same mitigation measures as the Specific Plan. Impacts would therefore be similar to those of the Specific Plan.

Groundwater Recharge and Sustainable Management

Reduced Density, Balanced Commercial development would not reduce the site's impervious surface area compared to the Specific Plan due to the requirement for construction of an impermeable cap on the landfill. Because the local groundwater basin is not used as a potable or non-potable water supply and is hydraulically connected to the Bay and Lagoon, this alternative would not interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level that could impede sustainable management of a groundwater basin or cause subsidence. In addition, as demonstrated in the Water Supply Assessment prepared by Cal Water, Baylands development would have no effect on groundwater pumping within South San Francisco. Impacts would be similar to the Specific Plan (less than significant).

Flood Hazards

By reducing the total amount of development while shifting some office development from the area west of Caltrain to the eastern portion of the site, this alternative would reduce impermeable surface area and generate a smaller increase in stormwater runoff than the Specific Plan. Reduced Density, Balanced Commercial development would comply with the same flood protection standards and mitigation measures as the Specific Plan. Impacts would be less than the Specific Plan due to reduced runoff since less impermeable area would be constructed compared to the Specific Plan.

Release of Pollutants Due to Flood, Emergent Groundwater, Tsunami, or Seiche

The Specific Plan area is not located within a tsunami hazard zone and the required on-site water storage tank facilities would be designed and constructed to withstand anticipated oscillations in water surface caused by an earthquake. Further, the risk of release of pollutants attributable to inundation would be negligible since potential pollutants would not be present at the ground surface. In addition, this alternative would be subject to the same less than significant potential for emergent groundwater as the Specific Plan. Thus, impacts would be similar to the Specific Plan.

Geology, Soils, and Seismicity

Fault Rupture

Because there are no known active or potentially active fault traces across the Baylands, and the site is not located within an Alquist-Priolo Earthquake Fault Zone, no impact would occur.

Seismic Ground Shaking

Reduced Density, Balanced Commercial development would be subject to subject to the same combination of building code compliance and mitigation measures as the Specific Plan, which would provide an appropriate level of safety. This alternative would reduce the number of people and structures subject to hazards from strong seismic ground shaking, reducing impacts compared to the Specific Plan.

Liquefaction and Seismic-Related Ground Failure

Because of the presence of high groundwater and loose, unconsolidated soils underlying the Specific Plan area, this alternative would be subject to the same liquefaction hazards as the Specific Plan. Reduced Density, Balanced Commercial development would be required to conform to the same site-specific foundation design parameters and EIR mitigation measures as the Specific Plan, resulting in similar impacts.

Slope Stability

The amount of grading needed for Reduced Density, Balanced Commercial development would be the same as for the Specific Plan, including the same embankments for the Geneva Avenue bridge over Caltrain. Site-specific development projects would be required to comply with the same development requirements, including compliance with the most recent adopted building code requirements for slope stability. The combination of compliance with building code requirements and EIR Mitigation Measures would result in a similar less than significant impact as the Specific Plan.

Expansive Soils and Soil Corrosivity

Wherever Bay Mud is present, such as along Bayshore Boulevard and during construction of deep foundations, corrosive and expansive subsurface soils are likely to be encountered. Site specific development projects for this alternative would be designed and constructed to comply with the requirements of final site-specific design-level geotechnical reports, which would ensure appropriate design and construction to mitigate soil corrosivity and expansive soils hazards for each building and infrastructure project. Compliance with the building code and EIR mitigation measures in combination with reducing the number of buildings would reduce hazards from soil corrosivity and expansive soils compared to the less than significant impacts of the Specific Plan.

Paleontological Resources

The only deep excavations that would disturb significant paleontological resources within the Colma or Merced Formations would be pile foundation installation. Because installation of pile foundations would render any potentially valuable specimens irretrievable, such installation is

not typically considered to cause significant impacts. This alternative would also have the same unlikely potential that excavations for other construction activities would be deep enough to encounter paleontological resources as the Specific Plan. Because this alternative would have the same potential for such excavations and would be subject to the same mitigation measures, impacts would be similar to the Specific Plan.

Use of Septic Tanks or Alternative Wastewater Disposal Systems

All Baylands development would be connected to a municipal wastewater system and neither septic tanks nor alternative wastewater disposal systems would be used.

Utilities, Service Systems, and Water Supply

Water Supply

Reduced Density, Balanced Commercial development would consume less water than the Specific Plan. Because it would generate less wastewater, this alternative would also generate less recycled water than the Specific Plan, unless sewage generated by the City and Bayshore Sanitary District were to be recycled on-site. As a result, water supply impacts of this alternative would be similar to the Specific Plan.

Construction and Improvement of Utility and Service System Facilities

Demolition, grading, and construction of utility facilities would be the same as for the Specific Plan and result in the same less than significant impacts.

Consistency with Solid Waste Management Policies

Because this alternative would generate the same amount of solid waste on a per unit basis (although less total solid waste for landfill disposal), be subject to the same mitigation measures, and achieve the same waste diversion rate as the Specific Plan, impacts would be similar to the Specific Plan.

Landfill Capacity

Reduced Density, Balanced Commercial development would generate less total solid waste, be subject to the same diversion programs, and achieve the same waste diversion rate as the Specific Plan. Thus, this alternative would reduce the Specific Plan's less than significant impact on landfill capacity.

Public Services and Facilities

Adverse Physical Environment Effects Associated with Construction or Improvements of Fire Protection, Police, School, and Other Public Facilities

Demolition, grading, and construction of fire protection, police, school, and other facilities to serve Baylands development would be the same as for the Specific Plan and result in similar less than significant impacts in relation to police, fire protection, and schools. This alternative would also generate similar demands, result in similar impacts, and be subject to the same mitigation measures as the Specific Plan in relation to libraries and the City's corporation yard.

Recreation Resources

Physical Deterioration of a Park or Recreational Facility

Reduced Density, Balanced Commercial development would retain the same ratio of improved parkland to population as the Specific Plan. Thus, parkland provided by this alternative would exceed the 5.03 acres per 1,000 population of parkland currently available to Brisbane residents to same degree as the Specific Plan and not cause any physical deterioration of existing parks and recreational facilities within the City. Because population growth would be less than the Specific Plan, this alternative would have a significant although proportionately smaller impact on existing community facilities. Reduced Density, Balanced Commercial development would be subject to a proportionately smaller mitigation requirement, resulting in a similar net impact as the Specific Plan.

Physical Deterioration of Candlestick Point Windsurfing Resources

Although Reduced Density, Balanced Commercial development would place buildings along Sierra Point Parkway, such buildings would be limited to a maximum 80-foot height within 300 feet of the US 101 freeway as would Specific Plan development. As a result, Reduced Density, Balanced Commercial development would have a similar less than significant effect on windsurfing resources as would the Specific Plan.

Wildland Fire

Exacerbate Fire Hazards

Reduced Density, Balanced Commercial development would result in similar construction activities within and adjacent to combustible vegetation and would reduce population/ employment growth compared to the Specific Plan. Wildland fire hazard impacts would be less than the Specific Plan.

Evaluation of Alternative 6, Reduced Density, Balanced Commercial Development in Relation to Project Objectives

Reducing the intensity of Baylands development throughout the Baylands would implement the Brisbane General Plan, including GP-1-18 and Measure JJ. In addition, this alternative would achieve each of the Project's overarching and other objectives (see **Table 8-12**).

Table 8-12: Evaluation of Alternative 6, Reduced Density, Balanced Commercial Development in Relation to Project Objectives

Project Objectives	Extent to Which Alternative 5, Reduced Density, Balanced Commercial Development, Would Achieve Objectives
The underlying purpose of the Baylands Specific Plan and the development it permits is to:	
Provide for the productive reuse of this brownfield site in a manner that eliminates ongoing ecological damage and ensures the safety of all who will use the Baylands.	Reduced Density, Balanced Commercial development would require site remediation and Title 27 landfill closure prior to development. This alternative would eliminate ongoing ecological damage, provide for productive reuse of the Baylands, and ensure the safety of all who will use the site.
Project Objectives for the Baylands are to:	
• Preserve and enhance the site's natural resources and historic features within a system of permanent open space that: o Restores and enhances wetlands and natural habitats within the Baylands; o Promotes visual connectivity between the Baylands, San Bruno Mountain, and San Francisco Bay; o Adapts to climate change and sea level rise; and o Provides a range of recreational opportunities and open space experiences for Baylands residents and workers as well as for the larger Brisbane community.	This alternative would restore and enhance habitats within Visitacion Creek, along the north shore of the lagoon, and on Icehouse Hill. This alternative would also restore and provide for adaptive reuse of the historic Roundhouse. By reducing the overall amount of development compared to the Specific Plan, this alternative would maintain a lower vertical profile than the Specific Plan. Reduced Density, Balanced Commercial development would protect development from adverse effects of climate change and sea level rise through an adaptation strategy that would provide for restoration of wetlands and non-wetland waters within Visitacion Creek and along the north shore of the lagoon to adapt naturally to sea level rise and increasing tidal influence.
• Implement the City's Housing Element by providing a mix of housing types, sizes, and densities that contributes to local and regional housing needs for all economic segments of the community, as well as for families and individuals of all ages and physical abilities.	Reduced Density, Balanced Commercial development would provide a sufficient mix and intensity of residential building types to provide opportunities for the development of housing for all economic segments of the community in accordance with the City's Housing Element. By reducing the number of dwelling units permitted within the Baylands, this alternative would make a smaller contribution to meeting future housing needs for the next required update of the City's Housing Element addressing need for the 2031-2039 Housing Element period than would the Specific Plan.
• Enhance Brisbane's economic vitality by ensuring that Baylands development will be revenue positive to the City.	Compared to the Specific Plan, Reduced Density, Balanced Commercial development would reduce residential development by 18.2 percent and commercial office development by 30.8 percent, while retaining the same amount of hotel development as the Specific Plan. This alternative would be revenue positive for the City although to a lesser degree than the Specific Plan.
• Establish the Baylands as a leading model of sustainable development consistent with the principles of the City's Sustainability Framework for the Baylands (Integral Group 2015).	Reduced Density, Balanced Commercial development would include all of the sustainability features set forth in the Specific Plan and EIR mitigation measures.

Project Objectives	Extent to Which Alternative 5, Reduced Density, Balanced Commercial Development, Would Achieve Objectives
• Attract office-based employment to the Baylands that provides a broad range of high-paying jobs as well as training and advancement opportunities for the community's young adults.	While this alternative would produce a lower jobs-to-housing ratio than the Specific Plan, Reduced Density, Balanced Commercial development would generate a mix of on-site employment at a sufficient scale to achieve this objective, although not to the same extent as the Specific Plan.
• Enable residents, workers, and visitors to be less dependent on cars.	This alternative would improve access to the Bayshore Caltrain station. Shifting some commercial development from the western to the eastern portion of the Baylands would place employee-generating development further from the Bayshore Caltrain station, reducing ease of access to transit for some employees compared to the Specific Plan.

Feasibility of Alternative 6, Reduced Density, Balanced Commercial Development, and Overall Conclusion

Reduced Density, Balanced Commercial development would be consistent with the Brisbane General Plan while reducing the overall development intensity of the Specific Plan. Concentrating development could reduce the cost for on-site infrastructure required to support 1,800 dwelling units, 4.5 million s.f. of commercial, and 500,000 s.f. of hotel use. As such, Alternative 5, Reduced Density, Balanced Commercial development, would be both reasonable and potentially feasible per the requirements of CEQA Guidelines Section 15126.6(a).

Overall, Reduced Density, Balanced Commercial development would reduce the environmental impacts of the Baylands Specific Plan.

d. Alternative 7: Reduced Density, Lower Maximum Building Height

The purpose of this alternative is to reduce the Project's significant impacts by both reducing overall Specific Plan development density and maximum building heights within the Baylands.

Land Use and Planning Policies

Physical Division of an Existing Community

Reduced Density, Lower Maximum Building Height development would include the same construction projects affecting area roadways as the Specific Plan, would be subject to the same requirements and mitigation measures, and would therefore result in similar construction impacts as the Specific Plan. Because this alternative's configuration of development and open space areas as well as its roadway and non-motorized transportation system would be the same as for the Specific Plan, the Reduced Density, Lower Maximum Height development would have similar impacts (less than significant) in relation to dividing an existing community as the proposed Specific Plan.

Plan Consistency

Reduced Density, Lower Maximum Height development is consistent with the General Plan's development intensity standards for the Baylands. Development of 1,800 dwelling units is at the low end of the range for housing specified in the General Plan, and approximately 18 percent below that of the Baylands Specific Plan, which represents the General Plan's maximum permitted number of dwelling units. Development of 4.5 million s.f. of commercial/office space would be consistent with the General Plan and would be approximately 30.7 percent less than the 6.5 million s.f. proposed in the Baylands Specific Plan. The same additional 500,000 s.f. of hotel development as the Specific Plan would also be consistent with the General Plan maximum permitted development. Consistency with local and regional policies would be the same as for the Specific Plan.

Population and Housing

Induce Substantial Unplanned Growth

Reduced Density, Lower Maximum Building Height development provides for 1,800 dwelling units, which would result in approximately 4,140 residents within the Baylands as compared to the 4,905 Baylands residents resulting from Specific Plan buildout. This reduced residential density and population is consistent with the Brisbane General Plan, which provides for 1,800 to 2,200 dwelling units within the Baylands. Reducing commercial office space within the Baylands to 4.5 million s.f. with an additional 500,000 s.f. of hotel use would reduce Baylands employment from 19,480 to 16,365 jobs, which would also be consistent with the Brisbane General Plan. Thus, population and employment growth associated with the Reduced Density, Lower Maximum Building Height development would be considered to be planned growth, not substantial unplanned growth, and impacts would be similar to the Specific Plan (less than significant).

Displacement of Existing Housing or Businesses

Because the Reduced Density, Lower Maximum Building Height development involves development of the same footprint as the Specific Plan, the same 231,400 s.f. of existing industrial businesses along Industrial Way would be displaced, resulting in the same less than significant impact. This alternative would also displace Golden State Lumber's laydown area and its ability to receive and ship lumber by rail, resulting in the same less than significant physical environmental impact and the same economic impact effect as the Specific Plan.

Housing for All Economic Segments of the Community

The Reduced Density, Lower Maximum Building Height development proposes 1,800 dwelling units, consistent with the Baylands residential development assumption set forth in the City's adopted Housing Element. This alternative would, therefore, meet City housing objectives for

the development of opportunities for housing for all segments of the community for the 2023-2031 housing period. By reducing Baylands housing by 400 units compared to the Specific Plan, this alternative would reduce opportunities for the development of housing for subsequent Housing Element updates, which are required on an 8-year basis.[412]

Urban Decay

Because Reduced Density, Lower Maximum Building Height development would provide less residential, retail, and office development than the Specific Plan, it would generate less demand for retail uses and reduce the less than significant urban decay impacts of the Specific Plan.

Aesthetic and Visual Resources

Public Views of Identified Scenic Resources (San Bruno Mountain and Adjacent Ridgelines, San Francisco Bay, and the Brisbane Lagoon)

Reducing development intensity by reducing the heights of taller buildings within the Baylands would reduce obstructions to views of the San Francisco Bay caused by the tower buildings along the Caltrain right-of-way. As shown in **Table 4.5-2a** through **Table 4.5-2r**, while development within the eastern portion of the Baylands has little effect on Bay views, it does block views of San Bruno Mountain from the east, particularly along the US 101 freeway. Lowering building heights east of the Caltrain right-of-way would have little or no effect on views from the US 101 freeway due to the closeness of buildings to the freeway but would reduce blockage of San Bruno Mountain views from more distant vantage points.

Impacts to Scenic Resources

Reduced Density, Lower Maximum Building Height development would provide for the same preservation and improvements of existing scenic resources within the Baylands as the Specific Plan. The Visitacion Creek corridor, Icehouse Hill, and the edges of Brisbane Lagoon would be improved in the same manner as the Specific Plan, including restoration of wetland and habitat areas, which would retain their natural character. This alternative would also extend the San Francisco Bay Trail through Baylands. Thus, Reduced Density, Lower Maximum Building Height development would have the same beneficial effects as the Specific Plan by preserving 100-foot shoreline band areas around the Visitacion Creek corridor and Brisbane Lagoon and providing public access to the Bay.

Consistency with Visual-Quality-Related Policies and Programs

Regardless of the specific density and distribution of land use within the Baylands, development would be required to be consistent with applicable visual-quality-related policies

[412] The City of Brisbane would be required to approve an updated Housing Element in 2031 for the 2031–2039 period.

and programs. Specifically, Reduced Density, Lower Maximum Building Height development would comply with the design principles reflected in the findings that are required to be made by the Planning Commission for approval of a design permit. Impacts would be similar to the Specific Plan.

Nighttime Lighting

Reduced Density, Lower Maximum Building Height development would have a similar potential to permit light sources that would result in light trespass and sky glow impacts as the Specific Plan. Because this alternative would be required to comply with the same performance standards and implement the same mitigation measures as the Specific Plan, similar less than significant with mitigation incorporated impacts would result compared to the Specific Plan.

Glare

Reduced Density, Lower Maximum Building Height development would reduce the amount of glare-producing reflective building materials on building roofs and façades within the Baylands compared to the Specific Plan. Nevertheless, 1,800 dwelling units, 4.5 million s.f. of commercial office space, and 500,000 s.f. of hotel use would generate substantial new sources of daytime glare, particularly in the early morning and late afternoon hours. Above-ground infrastructure could also include highly reflective stainless-steel piping and cladding on structures.

Glare resulting from development of this alternative could produce nuisance effects within residential areas, classrooms, parks, trails, and playgrounds, as well as adversely affect air traffic leaving San Francisco International Airport and motorists along US Highway 101, Geneva Avenue, and Bayshore Boulevard by impairing vision, although to a somewhat lesser degree than the Specific Plan due to reduced development density.

While Reduced Density, Lower Maximum Building Height development would have less glare-producing surface area than the Specific Plan and thereby reduce impacts, this alternative would nevertheless result in a significant glare impact and be subject to the same mitigation measures as the Specific Plan. Due to a reduced amount of glare-producing surface area, a reduced less than significant with mitigation incorporated impact would result compared to the Specific Plan.

Biological Resources

Candidate, Sensitive, and Special-Status Plants, Animals, and Habitats

Because Reduced Density, Lower Maximum Building Height development would have the same development footprint throughout the Baylands, it would require the same movement of soil from the eastern to the western portion of the Baylands to achieve final grades. Thus,

similar impacts to existing species and habitats would occur, requiring similar mitigation as would the Specific Plan.

Wetlands and Non-Wetland Waters Acreage, Functions, and Values

Because this alternative would have the same development footprint as the Specific Plan, a similar acreage of wetlands and non-wetland waters would be lost during site grading and construction compared to the Specific Plan, even if overall development density were to be reduced. In addition, the need to realign Lagoon Road, along with General Plan requirements for improved open space and recreational areas, would result in the loss of wetlands and non-wetland waters along the north shore of the lagoon along with construction of Lagoon Park. Thus, Reduced Density, Lower Maximum Building Height development would result in a similar less than significant with mitigation incorporated impact as the Specific Plan.

Movement of Fish and Wildlife Species

Trails and recreational improvements on Icehouse Hill would remain unchanged from the Specific Plan. Because a reduced amount of building glass area would result than the Specific Plan, bird-strike impacts would be reduced although implementation of the same mitigation measures would be required. Due to a reduced amount of building glass area, impacts would be reduced compared to the Specific Plan.

Consistency with Brisbane Municipal Code Chapter 12.12, Private Tree Regulations

Reduced Density, Lower Maximum Building Height development would be required to comply with the requirements of Brisbane Municipal Code Chapter 12.12. As a result, impacts would be unchanged from the Specific Plan.

Consistency with the San Bruno Mountain Habitat Conservation Plan

Because this alternative would provide the same improvements within Icehouse Hill as would the Specific Plan, impacts would be unchanged.

Cultural and Tribal Cultural Resources

Roundhouse and Machinery & Equipment Buildings

Because lowering building heights would not change site grading, the Roundhouse would be restored for adaptive reuse in the same manner as proposed for the Specific Plan and impacts would be the same. In addition, development surrounding the Roundhouse and Machinery & Equipment would be consistent with their historic character. Thus, this alternative would result in a similar less than significant with mitigation incorporated impact as the Specific Plan.

Archaeological Resources

Because lowering building heights would not change site grading and other ground-disturbing activities, impacts and resulting mitigation measures would be the same as for the Specific Plan.

Tribal Cultural Resources

Because no tribal cultural resources have been identified within the Baylands, no impacts would result.

Disturbance of Known or Unknown Human Remains

Because lowering building heights would not change site grading and other ground-disturbing activities, impacts and resulting mitigation measures would be the same as the Specific Plan.

Transportation

Vehicle Miles Traveled

Reducing building heights and reducing the intensity of development within the western portion of the Baylands would slightly decrease the proportion of employees within the eastern portion of the site beyond walking distance of the Caltrain Bayshore Station. Per capita VMT for Baylands employees would be slightly higher than for the Specific Plan as a result.

Transit, Bicycle, and Pedestrian Travel Modes

Reduced Density, Lower Maximum Building Height development would provide a comprehensive system of bicycle and pedestrian facilities within the Baylands similar to the Specific Plan. This alternative would result in slightly reduced use of transit, bicycle, and pedestrian modes of travel since a slightly greater proportion of employees within the eastern portion of the site would be further from the Caltrain Bayshore station compared to the Specific Plan.

Hazards to Vehicles, Bicyclists, and Pedestrians

All roadways throughout the Baylands would be required to be constructed to City standards. Impacts in relation to transportation hazards would thus be similar to the Specific Plan.

Emergency Access

The Specific Plan area, each development district, and each block within the Baylands would continue to have more than one point of access facilitating emergency response. Extending Geneva Avenue from Bayshore Boulevard over the Caltrain right-of-way to the US 101 freeway and extending Sierra Point Parkway would be accomplished in accordance with EIR mitigation

measures. Thus, emergency response impacts would be similar to the Specific Plan's less than significant with mitigation incorporated impact.

Air Quality

Consistency with the 2017 Regional Clean Air Plan

Reducing building heights within the western portion of the Baylands while simultaneously reducing the amount of residential and commercial development as the Specific Plan would slightly reduce the proportion of Baylands office development in proximity to transit. This alternative would include all of the same features and be subject to the same mitigation measures as the Specific Plan and would therefore be consistent with the 2017 Clean Air Plan.

Increased Emissions of Non-Attainment Criteria Air Pollutants

Lowering building heights while simultaneously reducing the amount of residential and commercial development as the Specific Plan would slightly reduce the proportion of Baylands office development in proximity to transit and therefore slightly increase per capita air pollutant emissions. This per capita increase would be offset by the reduced density of Baylands development, resulting in reduced mobile source pollutant emissions for project operations.

The amount of grading required for Reduced Density, Lower Maximum Height development would be similar to the Specific Plan. Thus, construction emissions and the resulting significant unavoidable construction impact would be similar to the Specific Plan.

Exposure of Sensitive Receptors to Substantial Pollutant Concentrations

Because site grading would be similar to the Specific Plan, exposure of sensitive receptors to pollutant concentrations resulting from grading activities would be similar to the Specific Plan, resulting in a similar less than significant with mitigation incorporated impact. Because the amount of building construction activity would be similar to the Specific Plan, impacts on on-site sensitive receptors would be similar to Specific Plan development.

Odors

The potential for odor generation during site grading would be similar to the Specific Plan. Reduced Density, Lower Maximum Height development would result in a more uniform distribution of development intensity within the western portion of the site but would not change the amount of development either upwind or downwind of the water recycling facility. Thus, odor impacts would be similar to Specific Plan development.

Greenhouse Gas Emissions

Specific Plan Area Greenhouse Gas (GHG) Emissions

Lowering building heights to reduce Baylands development by 400 dwelling units and 2.5 million s.f. of commercial office use would reduce the Specific Plan's net increase of GHG emissions and reduce the severity of its significant unavoidable impact.

Effect on Regional GHG Emissions

Because per capita VMT for Baylands employees would be slightly higher than for the Specific Plan, the Reduced Density, Lower Maximum Building Height development would result in a smaller reduction in regional VMT and mobile source GHG emissions than the Specific Plan.

Consistency with GHG Reduction Plans, Policies, Performance Standards, and Regulations

Reduced Density, Lower Maximum Building Height development would include the same GHG reduction features and be subject to the same mitigation measures as the Specific Plan and would therefore be consistent with applicable GHG reduction plans, policies, performance standards, and regulations.

Energy Resources

Wasteful, Inefficient, or Unnecessary Use of Energy

By reducing the total number of dwelling units and commercial square footage within the Baylands, the Specific Plan's 55-acre solar field would reduce overall energy use and generate a greater proportion of the Specific Plan's on-site energy demand within the Baylands. On-site buildings would provide the same energy conservation features as the Specific Plan but would also meet Tier 2 CALGreen Standards. As a result, this alternative would reduce the Specific Plan's less than significant impact.

Consistency with Applicable Energy Reduction Programs, Plans, Ordinances, and Policies

In addition to the energy efficiency features of the Specific Plan, this alternative would generate a greater proportion of the energy it consumes as well as meet Tier 2 CALGreen Standards. Reduced Density, Lower Maximum Building Height development would, therefore, be consistent with applicable energy reduction programs, plans, ordinances, and policies.

Noise and Vibration

Temporary Increase in Ambient Noise

The extent of site grading required for Reduced Density, Lower Maximum Building Height development would be no different than that of the Specific Plan, resulting in similar noise impacts. Lowering the heights of taller buildings while simultaneously reducing the Specific Plan's overall development intensity could reduce the number of buildings that would require pile foundations compared to the Specific Plan. In addition, the combination of reduced building heights and development intensity could enhance the feasibility of constructing pile foundations using quieter technologies, which would reduce the amount of pile driving required for Baylands development. As a result, Reduced Density, Lower Maximum Building Height development would reduce the severity of the Specific Plan's significant unavoidable impact if fewer buildings would require pile driving.

Traffic Noise Increase

Reduced Density, Lower Maximum Building Height development would generate less traffic than the Specific Plan, while retaining direct access to the US 101 freeway Candlestick interchange. As a result, the amount of traffic along area roadways would decrease, reducing significant unavoidable impacts of the Specific Plan, although not to a less than significant level.

Permanent Increase in Ambient Noise

Reduced Density, Lower Maximum Building Height development would generate noise from the same stationary sources as the Specific Plan. Due to the logarithmic scale used to measure noise, reducing development intensity would not likely be sufficient to substantially reduce permanent increases in ambient noise compared to the Specific Plan. This alternative would be subject to the same performance standards and mitigation measures would be required to comply with City noise ordinance requirements. Impacts would thus be similar to those of the Specific Plan (significant and unavoidable).

Exacerbate Land Use / Noise Incompatibilities by Placing People in High Noise Areas

Because the tallest buildings within the Baylands are those closest to the Caltrain rail line, Reduced Density, Lower Maximum Building Height development would reduce the number of dwelling units and square footage of commercial office development adjacent to the Caltrain right-of-way and the US 101 freeway. Thus, impacts would be less than the Specific Plan.

Groundborne Vibration

Because the same grading would be required for Reduced Density, Lower Maximum Building Height development, vibration generated during site grading would be similar to the Specific

Plan. Lowering the heights of taller buildings while simultaneously reducing the Specific Plan's overall development intensity would, at a minimum, not increase and could decrease the number of buildings that would require pile foundations compared to the Specific Plan. As a result, Reduced Density, Lower Maximum Building Height development could reduce the severity of the Specific Plan's significant unavoidable impact.

Exacerbate Human Annoyance or Hazards by Placing Buildings in High Groundborne Vibration Areas

Because the tallest buildings within the western portion of the Baylands are those closest to the Caltrain rail line, the number of dwelling units and square footage of commercial office development adjacent to the Caltrain right-of-way would decrease while commercial office development proximity to the US 101 freeway would be eliminated. Thus, impacts for this alternative would be less than for the Specific Plan.

Hazards and Hazardous Materials

Risks Involved in Transport, Use, Disposal, and Management of Hazardous Materials

Demolition of older buildings potentially containing asbestos or lead-based paints would be the same for Reduced Density, Lower Maximum Building Height development as for the Specific Plan. Because the types and intensity of uses would be similar but reduced in intensity, the potential for a release of hazardous materials due to the transport, use, disposal, or management of hazardous materials, whether resulting from routine activities or an accident, would be reduced and likely adversely affect fewer people within the Baylands than would the Specific Plan. Baylands development in this alternative would be subject to the same extensive set of regulations designed to protect the public and environment from such a release of hazardous materials. Thus, impacts would be less than those of the Specific Plan.

Create a Health Hazard for an Existing or Planned School Site due to Release of Hazardous Materials or Proximity of Hazardous Conditions

The location of a school site within the Baylands in relation to locations of hazardous materials sites and emitters would be similar to the Specific Plan. Thus, the impact of this alternative would also be similar.

Development on a Property that is Included on a List of Hazardous Materials Sites

Reduced Density, Lower Maximum Building Height development would have the same footprint as the Specific Plan, including the former railyard and former Brisbane Landfill, which are included on databases listing hazardous materials pursuant to Government Code Section 65962.5. The same site remediation and final landfill closure pursuant to Title 27 requirements would be implemented for this alternative as for the Specific Plan prior to

development. This alternative would be subject to the same requirements as the Specific Plan and would have a similar impact.

Create an Airport Safety Hazard or Expose People to Excessive Noise of Aircraft Operations

Since none of the Specific Plan area is subject to safety hazards of excessive noise due to aircraft operations, this alternative would have the same impact as the Specific Plan.

Emergency Preparedness and Response

Because this alternative would have the same amount of development within the same footprint as the Specific Plan, impacts would be the same.

Hydrology and Water Quality

Protection of Water Quality

The amount of grading and construction needed for Reduced Density, Lower Maximum Building Height development would be similar to the Specific Plan, including the high potential for potential for erosion and siltation and release of pollutants during grading and construction. Because this alternative would have a similar roadway system, the potential for release of urban pollutants to the Brisbane Lagoon and to San Francisco Bay via Visitacion Creek would be similar to the Specific Plan. This alternative would implement a similar set of Best Management Practices outlined in required NPDES permits, SWPPPs and the requirements of NPDES Provision C.3. Impacts would therefore be similar to the Specific Plan.

Groundwater Recharge and Sustainable Management

Reduced Density, Lower Maximum Building Height development would not reduce the site's impervious surface area compared to the Specific Plan due to the requirement for construction of an impermeable cap on the landfill. Because the local groundwater basin is not used as a potable or non-potable water supply and is hydraulically connected to the Bay and lagoon, this alternative would not interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level that could impede sustainable management of a groundwater basin or cause subsidence. In addition, as demonstrated in the Water Supply Assessment prepared by Cal Water, Baylands development would have no effect on groundwater pumping within South San Francisco. Impacts would be similar to the Specific Plan (less than significant).

Flood Hazards

This alternative would have a similar development footprint with a similar impermeable surface area and generate a similar stormwater runoff as the Specific Plan. Reduced Density,

Lower Maximum Building Height development would comply with the same flood protection standards and requirements, resulting in similar impacts as the Specific Plan.

Release of Pollutants Due to Flood, Emergent Groundwater, Tsunami, or Seiche

The Specific Plan area is not located within a tsunami hazard zone and the required on-site water storage tank facilities would be designed and constructed to withstand anticipated oscillations in water surface caused by an earthquake. Further, the risk of release of pollutants attributable to inundation would be negligible since potential pollutants would not be present at the ground surface and no facilities storing hazardous materials would be located downstream of Baylands water storage facilities. In addition, this alternative would be subject to the same less than significant potential for emergent groundwater as the Specific Plan. Thus, impacts would be the same as for the Specific Plan.

Geology, Soils, and Seismicity

Fault Rupture

Because there are no known active or potentially active fault traces across the Baylands, and the site is not located within an Alquist-Priolo Earthquake Fault Zone, no impact would occur.

Seismic Ground Shaking

Development would be required to conform to the same CBC seismic design parameters and mitigation measures as the Specific Plan, which would provide an appropriate level of safety. Due to fewer people and less development within the Baylands, development of this alternative would result in reduced impacts compared to the Specific Plan.

Liquefaction and Seismic-Related Ground Failure

Because of the presence of high groundwater and loose, unconsolidated soils underlying both the western and eastern portions of the Specific Plan area, this alternative would be subject to similar liquefaction hazards as the Specific Plan. Reduced Density, Lower Maximum Building Height development would be required to conform to the same site-specific foundation design parameters and requirements as the Specific Plan. Thus, similar impacts would result.

Slope Stability

Reduced Density, Lower Maximum Building Height development would produce similar grading and manufactured slopes as the Specific Plan. Site-specific development projects would be required to comply with the same California Building Code requirements for slope stability. Compliance with the same California Building Code and City requirements as the Specific Plan would result in similar less than significant impacts.

Expansive Soils and Soil Corrosivity

Wherever Bay Mud is present, such as along Bayshore Boulevard as well as during construction of deep foundations, corrosive and expansive subsurface soils are likely to be encountered. Site-specific development projects would be designed and constructed to comply with the same requirements of final site-specific design-level geotechnical reports as the Specific Plan, which would ensure appropriate design and construction to mitigate soil corrosivity and expansive soil hazards. The combination of compliance with the CBC and City requirements would reduce hazards from soil corrosivity and expansive soils to a similar less than significant level as the Specific Plan.

Paleontological Resources

The only deep excavations that would disturb significant paleontological resources within the Colma or Merced Formations would be pile foundation installation. Because installation of pile foundations would render any potentially valuable specimens irretrievable, such installation is not typically considered to cause significant impacts. This alternative would also have the same unlikely potential that excavations for other construction activities would be deep enough to encounter paleontological resources. Because this alternative would have the same potential for such excavations as the Specific Plan and would be subject to the same mitigation measures, impacts would be similar to the Specific Plan.

Use of Septic Tanks or Alternative Wastewater Disposal Systems

Baylands development would be connected to a municipal wastewater system and neither septic tanks nor alternative wastewater disposal systems would be used.

Utilities, Service Systems, and Water Supply

Construction and Improvement of Utility and Service System Facilities

Demolition, grading, and construction of utility facilities would be the same as for the Specific Plan and result in the same less than significant impacts.

Water Supply

Reduced Density, Lower Maximum Building Height development would consume less water than the Specific Plan. Because it would generate less wastewater, this alternative would also generate less recycled water than the Specific Plan, unless sewage generated by the City and Bayshore Sanitary District were to be recycled on-site. As a result, water supply impacts of this alternative would be similar to the Specific Plan.

Construction and Improvement of Utility and Service System Facilities

Demolition, grading, and construction of utility facilities would be the same as for the Specific Plan and result in the same less than significant impacts.

Consistency with Solid Waste Management Policies

Because this alternative would generate the same amount of solid waste on a per unit basis, would be subject to the same diversion programs, and would achieve the same waste diversion rate as the Specific Plan, impacts would be similar to the Specific Plan.

Landfill Capacity

Reduced Density, Lower Maximum Building Height development would generate less total solid waste, be subject to the same diversion programs, and achieve the same waste diversion rate as the Specific Plan. By reducing the amount of development, this alternative would reduce the Specific Plan's less than significant impact on landfill capacity.

Public Services and Facilities

Adverse Physical Environment Effects Associated with Construction or Improvements of Fire Protection, Police, School, and Other Public Facilities

Demolition, grading, and construction of fire protection, police, school, and other facilities to serve Baylands development would be the same as for the Specific Plan and result in similar less than significant impacts in relation to police, fire protection, and schools. This alternative would also generate similar demands, result in similar impacts, and be subject to the same mitigation measures as the Specific Plan in relation to libraries and the City's corporation yard.

Recreation Resources

Physical Deterioration of a Park or Recreational Facility

Reduced Density, Lower Maximum Building Height development would provide parkland in excess of the 5.03 acres per 1,000 population of parkland currently available to Brisbane residents and not cause any physical deterioration of existing parks and recreational facilities within the City. Because population growth would be reduced in comparison to the Specific Plan, this alternative would have a proportionately lesser (although still significant) impact on existing community facilities and be subject to the same mitigation as the Specific Plan, resulting in a similar impact.

Physical Deterioration of Candlestick Point Windsurfing Resources

Reduced Density, Lower Maximum Building Height development would reduce the height of the tallest buildings within the western portion of the Baylands. While the location of commercial office buildings east of the Caltrain right-of-way would remain unchanged, some building heights would be reduced. As a result, this alternative would reduce the less than significant impact of the Specific Plan.

Wildland Fire

Exacerbate Fire Hazards

Reduced Density, Lower Maximum Building Height development would result in similar construction activities within and adjacent to combustible vegetation and would reduce population/employment growth compared to the Specific Plan. Wildland fire hazard impacts would be less than the Specific Plan.

Evaluation of Alternative 7, Reduced Density, Lower Maximum Building Height, in Relation to Project Objectives

Lowering the maximum building heights of the tallest proposed buildings within the Baylands and reducing the overall amount of development permitted within the Baylands compared to the Specific Plan would implement the Brisbane General Plan, including GP-1-18 and Measure JJ. In addition, this alternative would achieve each of the project's overarching and other objectives (see **Table 8-13**). Reduced Density, Lower Maximum Building Height development provides for productive reuse of the Baylands along with restoration and enhancement of on-site resources. Housing opportunities for all economic segments of the community would be provided to meet the City's RHNA and adopted Housing Element obligations (see **Table 4.4-1**), along with providing economic development opportunities and fiscal benefits for the community. Environmental impacts of the Baylands Specific Plan would be reduced overall.

Table 8-13: Extent to Which Alternative 7, Reduced Density, Lower Maximum Building Height Development, Would Achieve Project Objectives

Project Objectives	Extent to Which Alternative 7, Lower Maximum Building Height (Reduced Density) Development, Would Achieve Objectives
The underlying purpose of the Baylands Specific Plan and the development it permits is to:	
Provide for the productive reuse of this brownfield site in a manner that eliminates ongoing ecological damage and ensures the safety of all who will use the Baylands.	Reduced Density, Lower Maximum Building Height development would require site remediation and Title 27 landfill closure prior to development. This alternative would also provide for the reuse of the Baylands, eliminate ongoing ecological damage, and ensure the safety of all who will use the site
Project Objectives for the Baylands are to:	
• Preserve and enhance the site's natural resources and historic features within a system of permanent open space that: o Restores and enhances wetlands and natural habitats within the Baylands; o Promotes visual connectivity between the Baylands, San Bruno Mountain, and San Francisco Bay; o Adapts to climate change and sea level rise; and o Provides a range of recreational opportunities and open space experiences for Baylands residents and workers as well as for the larger Brisbane community.	This alternative provides restoration and enhancement of on-site habitat areas within Visitacion Creek, along the north shore of the lagoon, and on Icehouse Hill. Restoration/adaptive reuse of the historic Roundhouse would occur in the same manner as the Specific Plan. By lowering building heights and reducing development intensity, this alternative would reduce obstructions to views of San Bruno Mountain and the San Francisco Bay compared to the Specific Plan. This alternative would protect development from adverse effects of climate change and sea level rise through an adaptation strategy that would allow wetlands and non-wetland waters along Visitacion Creek and the north shore of the lagoon to adapt naturally to sea level rise and increasing tidal influence.
• Implement the City's Housing Element by providing a mix of housing types, sizes, and densities that contribute to local and regional housing needs for all economic segments of the community, as well as for families and individuals of all ages and physical abilities.	This alternative would provide a sufficient amount, mix, and intensity of residential building types to provide housing for all economic segments of the community in accordance with the City's Housing Element through 2031 but would also make a smaller contribution to meeting future housing needs beyond the 2031 than would the Specific Plan.
• Enhance Brisbane's economic vitality by ensuring that Baylands development will be revenue positive to the City.	Compared to the Specific Plan, this alternative would reduce residential development by 18.2 percent and commercial office development by 30.1 percent, while retaining the same amount of hotel development. As a result, Reduced Density, Lower Maximum Building Height development should be revenue positive for the City.
• Establish the Baylands as a leading model of sustainable development consistent with the principles of the City's Sustainability Framework for the Baylands (Integral Group 2015).	Reduced Density, Lower Maximum Building Height development would include all of the sustainability features set forth in the Specific Plan and EIR mitigation measures.
• Attract office-based employment to the Baylands that provides a broad range of high-paying jobs as well as training and advancement opportunities for the community's young adults.	This alternative would also generate the same types of employment opportunities as the Specific Plan, although to a lesser degree.
• Enable residents, workers, and visitors to be less dependent on cars.	This alternative would improve access to the Bayshore Caltrain station and place all residents within walking distance of the station.

Feasibility of Alternative 7, Reduced Density, Lower Maximum Building Height Development, and Overall Conclusion

The Reduced Density, Lower Maximum Building Height development would be consistent with the Brisbane General Plan while reducing the overall development program of the Specific Plan. The resulting 1,800 dwelling units, 4.5 million s.f. of commercial, and 500,000 s.f. of hotel use would not introduce any additional building types or development densities to the Specific Plan area. As such, Alternative 7, Reduced Density, Lower Maximum Building Height development would be both reasonable and feasible per the requirements of CEQA Guidelines Section 15126.6 (a).

Overall, the Reduced Density, Lower Maximum Building Height alternative would reduce the environmental impacts of the Baylands Specific Plan.

8.5 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA Guidelines Section 15126.6(e)(2) states, "If the environmentally superior alternative is the 'no project' alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives." Typically, the "No Project-No Build" alternative constitutes the environmentally superior alternative since no changes to the physical environment would occur, thereby requiring identification of another alternative to the project to be identified as being "environmentally superior."

8.5.1 SUMMARY COMPARISON OF LAND DEVELOPMENT ALTERNATIVES

The following tables summarize differences between the alternatives considered above in relation to their impacts and relative effectiveness at reducing significant impacts, as well as their advantages and disadvantages.

Table 8-14: Advantages and Disadvantages of EIR Alternatives

Alternative	Summary of Advantages and Disadvantages
No Project-No Build	Eliminating proposed future development and leaving the Baylands in its existing condition would avoid the 2025 Specific Plan project's significant unavoidable environmental impacts and largely avoid the project's other environmental impacts. The No Project-No Build Alternative would, however, prevent implementation of the General Plan and generate new impacts. • Eliminating residential development within the Baylands would require the City to identify and rezone locations outside of the Baylands to accommodate an additional 1,164 dwelling units through 2031 as defined in the City's RHNA. • The historic Roundhouse would continue to deteriorate, leading to its eventual loss in the absence of intervention with public funding. • By leaving Lagoon Road in its current location, projected sea level rise over time would cause daily and ultimately permanent inundation of the roadway, limiting

Alternative	Summary of Advantages and Disadvantages
	access to the Sierra Point Subarea and requiring public expenditure for roadway realignment. • Existing contamination within the western portion of the Baylands would not be remediated, nor would the former Brisbane landfill undergo final closure pursuant to Title 27 requirements.
No Project-General Plan Buildout	The No Project-General Plan Buildout Alternative would be consistent with the General Plan, restore the Roundhouse for adaptive use, and provide zoning to accommodate housing for all economic segments of the community through 2031. However, by eliminating proposed General Plan amendments from the project, this alternative would: • Leave Lagoon Road subject to projected sea level rise that would, over time, cause daily and ultimately permanent inundation of the roadway, limiting access to the Sierra Point Subarea and requiring public expenditure for roadway realignment. • Create confusion for Specific Plan implementation due to differing General Plan policies for the Beatty and Baylands Subarea portions of the Specific Plan area. This alternative would also increase overall development intensity by applying the 6.5 million s.f. maximum commercial development established in GP-1-18 and Measure JJ only to the Baylands Subarea, which would permit additional development within the Beatty portion of the Specific Plan area.
1. Proposed Density Development Around an Operating 45-Acre Light Maintenance Facility	The alternative differs from the Specific Plan by shifting the alignment of Tunnel Avenue slightly to the east and moving infrastructure facilities from the west side of Tunnel Avenue to accommodate construction and operation of a 45-acre light maintenance facilities by the California High-Speed Rail Authority. Impacts of this alternative would be similar to those of the 2025 Specific Plan project, including its significant unavoidable impacts.
2. Proposed Density, Balanced Commercial Development	The alternative differs from the Specific Plan by shifting 400,000 s.f. of office development from the western to the eastern portion of the site. • The resulting balance of commercial development (3.6 million s.f. office west of Caltrain and 2.9 million s.f. to the east) would better implement General Plan policy calling for commercial uses to be distributed to both sides of the Caltrain right-of-way than the Specific Plan but would have little to no effect on most project impacts. • This alternative would have the potential to reduce the visual mass of commercial development west of Caltrain compared to other Project Density alternatives.
3. Proposed Density, Lower Maximum Building Height	This alternative reduces maximum building heights to 12 stories for commercial buildings and 8 stories for residential uses and thereby eliminates the Specific Plan's proposed 20+ story towers. Compared to the Specific Plan and other Project Density alternatives, reducing the maximum permitted height of Baylands residential development while permitting the maximum allowable development proposed in the Specific Plan would: • Result in a more uniform profile across the site with substantially reduced variation in building heights. • Substantially reduce or possibly eliminate the number of lower density residential building types (single family, duplex, townhouse). • Require increasing the heights of lower profile buildings proposed in the Specific Plan, potentially leading to an increased need for pile driving building foundations.
4. Reduced Commercial Development	The Reduced Commercial Development Alternative would reduce Specific Plan commercial development from 6.5 to 4.5 million s.f. • This alternative would reduce the Specific Plan's impacts, including its significant unavoidable impacts although not to the same degree as other reduced density alternatives that were analyzed.

Alternative	Summary of Advantages and Disadvantages
	• While this alternative would not reduce impacts to the same degree as other reduced density alternatives, it would also not reduce housing opportunities that might be needed to meet future Regional Housing Needs Allocations. • By concentrating commercial development east of Caltrain along the Geneva Avenue and Sierra Point Parkway corridors, the 55-acre solar farm would be expanded and the Baylands would generate a greater proportion of its electrical demand on-site.
5. Reduced Density Development Around an Operating 45-Acre Light Maintenance Facility	Alternative 5 would reduce Specific Plan residential development from 2,200 to 1,800 dwelling units, while also reducing commercial development from 6.5 to 4.5 million s.f. • This alternative would reduce the Specific Plan's impacts, including its significant unavoidable impacts. • By concentrating commercial development east of Caltrain along the Geneva Avenue and Sierra Point Parkway corridors, the 55-acre solar farm would be expanded and the Baylands would generate a greater proportion of its electrical demand on-site. • While this alternative would provide adequate residential zoning to meet the current Housing Element's quantified objectives, it would also provide less opportunity for the development of housing to meet the quantified needs for housing development for future Housing Elements.
6. Reduced Density, Balanced Commercial Development	Alternative 6 would reduce Specific Plan residential development from 2,200 to 1,800 dwelling units, while also reducing commercial development from 6.5 to 4.5 million s.f. It would also shift 200,000 s.f. of commercial use from the western to the eastern portion of the Baylands compared to other reduced density alternatives. • This alternative would have the potential to reduce the visual mass of commercial development to a greater degree than other alternatives. • While this alternative would not reduce impacts to the same degree as other reduced density alternatives, it would also not reduce housing opportunities that might be needed to meet future Regional Housing Needs Allocations. • Office development within the eastern portion of the Baylands would be located in the same footprint as the Specific Plan. As a result, buildings could be lower in height compared to other reduced density development, although the solar field would not be increased.
7. Reduced Density, Lower Maximum Building Height	Alternative 7 reduces residential development from 2,200 to 1,800 dwelling units, while also reducing commercial development from 6.5 to 4.5 million s.f. This is accomplished by reducing maximum building heights to 12 stories for commercial buildings and 8 stories for residential uses and thereby eliminates the Specific Plan's proposed 20+ story towers. • Variation in building heights and lower density residential and office building types (single family, duplex, townhouse) would be retained without increasing the number of buildings requiring pile driving for building foundations. • This alternative would reduce the Specific Plan's overall impacts, including its significant unavoidable impacts. • While this alternative would provide adequate residential zoning to meet the current Housing Element's quantified objectives, it would also provide less opportunity for the development of housing to meet the quantified needs for housing development for future Housing Elements. • By concentrating commercial development east of Caltrain along the Geneva Avenue and Sierra Point Parkway corridors, the 55-acre solar farm would be expanded and the Baylands would generate a greater proportion of its electrical demand on-site.

8.5.2 ENVIRONMENTALY SUPERIOR ALTERNATIVE: REDUCED DENSITY, LOWER MAXIMUM BUILDING HEIGHT

The environmentally superior alternative for the Baylands considers both the number of significant impacts each alternative would generate as well as the relative severity of each alternative's adverse environmental effects. The Reduced Density, Lower Maximum Building Height alternative would be the environmentally superior alternative for Baylands land development since it would have the least overall adverse effect on the physical environment in comparison to the Specific Plan and the alternatives evaluated in this Draft EIR. Reduced Density, Lower Maximum Building Height development would have the following effects on the significant unavoidable impacts of the Specific Plan:

Impact AQ-1: The Baylands Specific Plan would cause a net increase in emissions of non-attainment criteria pollutants (ROG, NO_X, $PM_{2.5}$, PM_{10},) exceeding BAAQMD Regional Criteria Pollutant Significance Thresholds during construction and for operations at the completion of Phase 1 development, as well as at full Specific Plan buildout.

Lowering building heights while simultaneously reducing the amount of residential and commercial development as the Specific Plan would reduce overall mobile source pollutant emissions for project operations.

Impact GHG-1: The Baylands Specific Plan would cause an increase in total greenhouse gas (GHG) emissions generated within the Baylands.

Lowering building heights to reduce Baylands development by 400 dwelling units and 2.5 million s.f. of commercial office use would reduce the Specific Plan's net increase of GHG emissions.

Impact NOI-1: The use of impact pile driving for construction of buildings over 5 stories in height or for the Geneva Avenue bridge in proximity to occupied residential and office buildings would cause unavoidable adverse effects, particularly if multiple pile driving activities were undertaken within the Baylands at the same time, until construction of such buildings is completed.

Lowering the heights of taller buildings while simultaneously reducing the Specific Plan's overall development intensity could decrease the number of buildings that would require pile foundations. In addition, reduced building heights could enhance the feasibility of constructing pile foundations using quieter technologies.

Impact NOI-2: The aggregate operation of all stationary noise sources would increase noise levels generated within the Specific Plan area as a whole. Because

the exact future location and configuration for all of these sources cannot be known at this time, it is not possible to ensure that the aggregate increase in noise levels at specific off-site receptor locations from stationary sources would not result in a permanent noise increase in excess of 5 dBA L_{eq}.

Due to the logarithmic scale used to measure noise, reducing development intensity would not likely be sufficient to substantially reduce permanent increases in ambient noise compared to the Specific Plan.

Impact NOI-3: Increased noise levels from Baylands-generated traffic would exceed applicable standards along one roadway segment at the conclusion of Phase 1 development (assumed to occur in 2035), increasing to 3 roadway segments at full Specific Plan buildout (assumed to be 2040).

Lower Maximum Building Height (Reduced Density) development would generate less traffic than the Specific Plan, while retaining direct access to the US 101 freeway Candlestick interchange. As a result, the amount of traffic along area roadways would decrease, reducing significant unavoidable impacts of the Specific Plan, although not to a less than significant level.

Additional effects of the Reduced Density, Lower Maximum Building Height Alternative include:

- Reducing the Specific Plan's overall impacts.
- Eliminating the Specific Plan's proposed 20+ story towers.
- Retaining variation in building heights and lower density residential and office building types (single family, duplex, townhouse) without increasing the number of buildings requiring pile driving for building foundations.
- Expanding the 55-acre solar farm and generating a greater proportion of the Baylands electrical demand on-site compared to the Specific Plan and Project Density alternatives.

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CHAPTER 9 SUBSEQUENT EIR ANALYSIS AND FINDINGS

9.1 INTRODUCTION

Because an EIR was certified for development of the Baylands in August 2018 (Brisbane Baylands Program EIR, State Clearinghouse #2006022136), this chapter analyzes the 2025 Specific Plan in relation to CEQA Section 21166 and CEQA Guidelines Section 15162 requirements for preparation of a subsequent or supplemental EIR. Many of the physical environmental effects that would result from the 2025 Specific Plan project represent new significant environmental effects that were not previously identified in the Program EIR or substantial increases in the severity of previously identified significant effects. These new and substantially more severe environmental impacts are described in this chapter, which serves as a Subsequent Draft EIR pursuant to the provisions of CEQA Section 21166 and CEQA Guidelines Section 15162, incorporating by reference the environmental analyses contained in Chapter 4 and the various appendices of this EIR.

CEQA Section 21166, *Subsequent or Supplemental Impact Report; Conditions*, states:

> When an environmental impact report has been prepared for a project pursuant to this division, no subsequent or supplemental environmental impact report shall be required by the lead agency or by any responsible agency, unless one or more of the following events occurs:
>
> (a) Substantial changes are proposed in the project which will require major revisions of the environmental impact report.
>
> (b) Substantial changes occur with respect to the circumstances under which the project is being undertaken which will require major revisions in the environmental impact report.
>
> (c) New information, which was not known and could not have been known at the time the environmental impact report was certified as complete, becomes available.

CEQA Guidelines Section 15162 expands upon CEQA Section 21166 and states:

> **15162. Subsequent EIRs and Negative Declarations**
>
> (a) When an EIR has been certified or a negative declaration adopted for a project, no subsequent EIR shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in the light of the whole record, one or more of the following:
>
> (1) Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the

involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;

(2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or Negative Declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or

(3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete, or the Negative Declaration was adopted, shows any of the following:

(A) The project will have one or more significant effects not discussed in the previous EIR or negative declaration;

(B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;

(C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or

(D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

The tables below provide one of the following conclusions based on substantial evidence for each impact analyzed in the Program EIR and Chapter 4 of this EIR:

1. **Neither a new significant impact that was not disclosed in the Program EIR nor a substantially more severe significant impact than was identified in the Program EIR would result because:**

    a. **The Specific Plan would have no impact.** This conclusion is reached if the 2025 Specific Plan would not have any measurable physical effect on the environment, which was also the conclusion of the Program EIR; or

    b. **The Program EIR Adequately Addresses the Specific Plan's Impact.** This conclusion is reached if the Baylands Program EIR would not be needed because it adequately addressed impacts the 2025 Specific Plan project and none of the

conditions set forth in CEQA Section 21166 or CEQA Guidelines Section 15162 that would require a subsequent or supplemental EIR would therefore occur.

2. **A new significant impact that was not disclosed in the Program EIR or a substantially more severe significant impact than was identified in the Program EIR would result due to:**

    a. **Substantial Changes to the Project.** This conclusion is reached if analysis indicates the presence of substantial changes to the project analyzed in the Program EIR would result in new significant environmental effects or a substantial increase in the severity of previously identified significant effects.

    b. **Substantial Changes to the Circumstances under which the Project is Undertaken.** This conclusion is reached if analysis indicates substantial changes occur with respect to the circumstances under which the project is undertaken that will require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects.

    c. **Availability of Information not Known when Program EIR was Certified.** This conclusion is reached if analysis indicates the availability of information of substantial importance that was not available at the time of the Program EIR such that will require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects.

9.2 CHANGES TO THE PROGRAM EIR PROJECT DESCRIPTION MADE BY THE 2025 SPECIFIC PLAN PROJECT

This section identifies changes made by the 2025 Specific Plan project to the project that was analyzed in the Program EIR, including differences between the 2025 Specific Plan project and:

- The 2011 Specific Plan proposed by the applicant (Section 9.2.1);
- Other Concept Plan Scenarios analyzed in the Program EIR (Section 9.2.2); and
- General Plan Amendment GP-1-18 as approved by the City Council and Measure JJ as approved by Brisbane voters in 2018.

9.2.1 COMPARISON OF THE 2011 SPECIFIC PLAN PROPOSED BY THE APPLICANT AND THE 2025 SPECIFIC PLAN PROJECT

As illustrated in **Table 9-1**, **Figures 9-1a and 9-1b**, and **Figures 9-2a and 9-2b**, the 2025 Specific Plan project described in Chapter 3 proposes substantial changes to the 2011 Specific Plan that

was proposed by the applicant and analyzed in the Program EIR. Compared to the 2011 Specific Plan in the Program EIR, the 2025 Specific Plan project includes the following land use changes:

- Reduces the number of dwelling units by 55 percent (from 4,434 to 2,200).
    - Retains approximately the same amount of residential acreage while reducing overall residential density (52.8 acres, 42.7 du/ac) compared to the 2011 Specific Plan (56.0 acres, 79.2 du/ac).
    - Increases the proportion of single-family lower-density housing products, while also increasing maximum residential building height from 125 feet to 270 feet to provide for construction of residential towers.
- Reduces the total amount of commercial development by 213,000 square feet (approximately 3.2 percent), while increasing projected employment within the Baylands by approximately 11 percent.
    - Reduces the amount of retail space by approximately 82 percent, while nearly doubling the amount of hotel use within the Baylands.
    - Reduces commercial office acreage and increases overall development intensity (133.3 acres, 1.21 FAR) compared to the 2011 Specific Plan (150 acres, 1.02 FAR).
    - Increases maximum office building height from 170 feet to 260 feet.
    - Eliminates previously proposed industrial development adjacent to the east side of the Kinder Morgan tank farm.
- Realigns Lagoon Road to serve as a through route from Bayshore Boulevard connecting directly to the US 101 freeway southbound on- and off-ramps within the Baylands.
- Increases the proposed onsite solar field from 19 to 55 acres, eliminates wind energy generation, and doubles the minimum requirement for onsite renewable energy generation from 42,400 MWh to 85,000 MWh.
- Adds development of a 250 MW utility-scale battery storage facility, distributed battery storage, onsite switching substation, and distributed battery storage within the Baylands, along with an underground gen-tie line and improvements at the PG&E Martin Substation to connect the Baylands electrical system.
- Retains the existing lumber yard in its current location rather than moving it to another location within Baylands. The 2025 Specific Plan designates Golden State Lumber's main facility as an "Existing Use Area."

In addition, the following changes are proposed to other project components.

- **Modify the proposed water supply for the Baylands.** The previously proposed water supply agreement under which the City would acquire up to 2,400 acre-feet per year (AFY) via a water transfer agreement with the Oakdale Irrigation District (OID) subject

to conveyance agreements to be executed among OID, Modesto Irrigation District, San Francisco Public Utilities Commission (SFPUC), and the City of Brisbane is no longer proposed.

The 2025 Specific Plan project instead proposes establishing the California Water Service Company (Cal Water) as the water agency for the Baylands, Sierra Point, and Beatty areas, which would make water now being provided by the City to those areas available for buildout of the balance of the City. This plan would use existing water sources available to BAWSCA agencies and would not require new infrastructure to deliver potable water to Brisbane. In exchange for the provision of potable water supply by Cal Water, the proposed Baylands water recycling facility would be doubled in size to provide up to 0.43 million gallons per day of recycled water for irrigation purposes to Cal Water for use within its South San Francisco District, requiring approximately 5.5 miles of offsite recycled water line construction.

- **Eliminate site remediation and landfill closure as part of the project.** Remedial action plans for Operating Units OU-SM and OU-2 have undergone environmental review based on the Program EIR and have been approved by state and county regulatory agencies. Thus, continued inclusion of site remediation and landfill closure as a component of Specific Plan development is no longer necessary.
- **Add a "Bayshore Boulevard Mobility Plan."** General Plan Amendment GP-1-19, which was adopted in January 2020 called for development of a plan to enhance mobility for Brisbane residents and reduce regional through traffic on Bayshore Boulevard. The Bayshore Boulevard Mobility Plan proposed by the City includes a "road diet" along Bayshore Boulevard that would reconfigure the roadway from four lanes (two in each direction) to two lanes (one in each direction), consolidate the closely spaced Main Street and Industrial Way intersections into a single intersection, and provide protected turn lanes, a multi-use trail, and bus turnouts.
- **Add relocation of Brisbane's existing fire station and establish a second fire station within the Baylands.** The Program EIR established performance criteria for emergency response to fires within the Baylands and called for preparation of a fire services and facilities plan, the results of which are reflected in this new project component. Fire station relocation was not previously analyzed in the Program EIR.
- **Provide a grade 6–8 middle school within the Baylands rather than the previously proposed elementary or charter high school.** The 2025 Specific Plan proposes development of a grade 6–8 middle school within the Baylands. Development of a middle school within the Baylands would necessitate conversion of the existing Bayshore School to a grade PK–5 elementary school, which was not previously analyzed in the Program EIR.

Table 9-1: Comparison of Development Proposed by the 2011 Specific Plan, GP-1-18/Measure JJ, and the 2025 Specific Plan

	2011 Specific Plan	Approved General Plan Amendment GP-1-18/ Measure JJ	2025 Specific Plan	Net Change from 2011 Specific Plan	Net Change from GP-1-18/ Measure JJ
Project Acreage	684.0 acres	684.0 acres	680.1 acres	(3.9) acres	(3.9) acres
Proposed Land Use					
Residential	4,434 d.u.	1,800 to 2,200 d.u.	2,200 d.u.	(2,234) d.u.	Maximum allowed
Commercial	6,713,000 s.f.	Up to 6,500,000 s.f.	6,500,000 s.f.	(184,000) s.f.	Maximum allowed
Office/R&D	6,118,500 s.f.		6,397,800 s.f.	+279,300 s.f.	
Retail	566,300 s.f.		102,200 s.f.	(464,100) s.f.	
Entertainment	28,200 s.f.				
Hotel	261,300 s.f. 329 rooms	500,000 s.f.	500,000 s.f. 800 rooms	+238,700 s.f. +481 rooms	None
Industrial	142,200 s.f.	None	None	(142,200) s.f.	None
Maximum Building Height					
Residential	125 feet		270 feet	+145 feet	
Commercial	170 feet		260 feet	+90 feet	
Non-Residential Development					
West of Caltrain	3,962,500 s.f.		4,500,000 s.f.	+537,500 s.f.	
East of Caltrain	3,125,000 s.f.		2,500,000 s.f.	(625,000) s.f.	
Total Square Feet	7,087,500 s.f.		7,000,000 s.f.	(87,500) s.f.	
Population and Employment					
Population	9,888 residents		4,905 residents	(4,983) residents	
Employees	17,540 employees		19,480 employees	+1,940 employees	
Open Space/Area					
Total	169.6 acres		157.0 acres	(12.6) acres	
Park Land	92.0 acres		64.8 acres	(27.2) acres	
Site Grading	Approximately 4,475,000 cubic yards of soil would be cut within the eastern portion of the site, approximately 3,730,000 cubic yards of which would be transported to the western portion of the site and placed as engineered fill.		Approximately 4,300,000 cubic yards of soil would be cut within the eastern portion of the site, approximately 2,500,000 cubic yards of which would be transported to the western portion of the site and placed as engineered fill.	(175,000) cubic yards	

	2011 Specific Plan	Approved General Plan Amendment GP-1-18/ Measure JJ	2025 Specific Plan	Net Change from 2011 Specific Plan	Net Change from GP-1-18/ Measure JJ
	The remaining 745,000 cubic yards of soils would be temporarily moved about within the landfill footprint to enable construction of an impermeable landfill cap, before being placed as engineered fill.		The remaining 1,800,000 cubic yards of soils would be temporarily moved about within the landfill footprint to enable construction of an impermeable landfill cap, before being placed as engineered fill.	+ 1,055,000 cubic yards	
Water Supply	Acquisition of a water supply for the Baylands from the Oakdale Irrigation District via water transfer agreements.	A reliable water supply approved by the City of Brisbane to support proposed uses within the Baylands shall be secured prior to site development.	Acquisition of a water supply for the Baylands, Beatty, and Sierra Point areas by expanding the California Water Service Company's South San Francisco District to serve these areas.		
Proposed Service Providers					
Water Service	City of Brisbane	City of Brisbane	California Water Service		
Sewer	Bayshore Sanitary District	Bayshore Sanitary District	Bayshore Sanitary District		
Police	Brisbane Police Department	Brisbane Police Department	Brisbane Police Department		
Fire Protection	North County Fire Authority	North County Fire Authority	North County Fire Authority		
Schools Districts	Bayshore Elementary (K–8)	Bayshore Elementary (K–8)	Bayshore Elementary (K–8)		
	Brisbane (K–8)	Brisbane (K–8)	Brisbane (K–8)		
	Jefferson Union High School (9–12)	Jefferson Union High School (9–12)	Jefferson Union High School (9–12)		

	2011 Specific Plan	Approved General Plan Amendment GP-1-18/ Measure JJ	2025 Specific Plan	Net Change from 2011 Specific Plan	Net Change from GP-1-18/ Measure JJ
Major Facilities Improvements					
Water and Wastewater	0.52 mgd water recycling facility for Baylands non-potable water demand 3.16-million-gallon above-ground water storage tank in offsite hillside location		0.95 mgd water recycling facility 0.52 mgd for Baylands non-potable water demand 0.43 mgd for non-potable water demand in Sierra Point and City of South San Francisco Offsite recycled water lines 3.16-million-gallon onsite above-ground water storage tank	+0.43 mgd	+0.43 mgd
Police	Police storefront substation	Police storefront substation	Police storefront substation		
Fire Protection	No specific facilities identified.	Fire protection facilities plan to be prepared to achieve Program EIR performance standards.	Relocate existing Fire Station No. 81 to 140 Valley Drive to house the existing Engine Company No. 81 and temporarily house a new ladder truck company. Construct a new fire station within the Baylands to the new ladder truck company and a new squad.		
Schools	Grade 9-12 charter high school		Grade 6–8 middle school. Existing Bayshore School to be converted from a Grade PK–8 to a PK–5 school.		

	2011 Specific Plan	Approved General Plan Amendment GP-1-18/ Measure JJ	2025 Specific Plan	Net Change from 2011 Specific Plan	Net Change from GP-1-18/ Measure JJ
Energy Facilities	19-acre solar farm and small wind energy facilities generating a minimum 42,400 MWh	Baylands development to be energy neutral on an ongoing basis.	55-acre solar farm and building-mounted solar PV panels generating a minimum 85,000 MWh. Distributed local battery storage and a 250 MW utility-scale battery storage facility. New switching substation within the Baylands. Offsite underground generation interconnect (gen-tie) line connection to the existing PG&E Martin Substation. Install line disconnect switch and line coupling capacitor voltage transformers for the gen-tie line at the existing PG&E Martin Substation.	Solar farm +36 acres Minimum Renewable Generation +42,600 MWh	Solar farm +36 acres Minimum Renewable Generation +42,600 MWh

Figure 9-1a: 2011 Specific Plan Land Use Plan Analyzed in the Program EIR

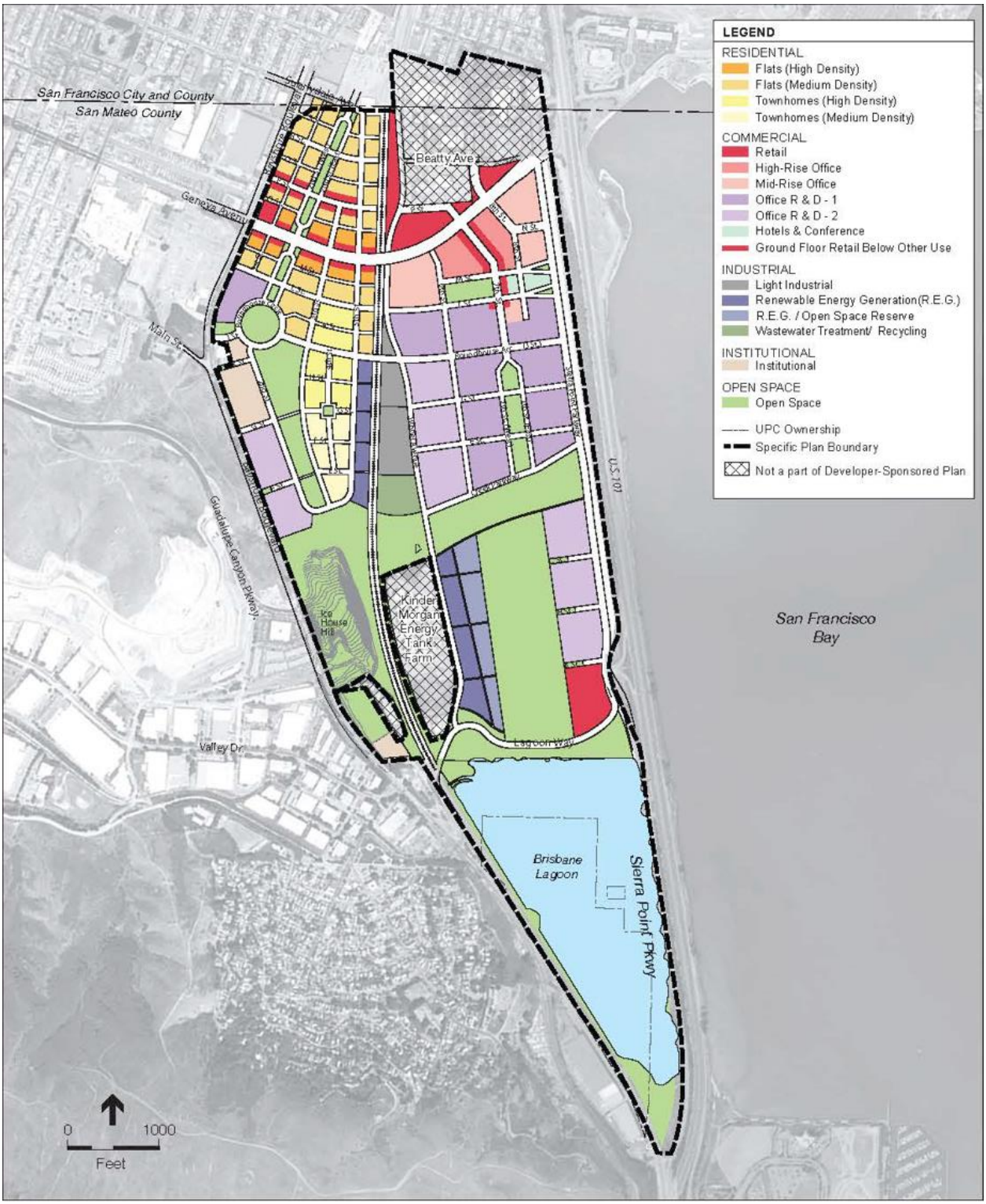


Figure 9-1b: 2025 Specific Plan EIR Land Use Plan Analyzed in this EIR

Figure 9-2a: Maximum Building Heights Analyzed in the Program EIR (2011 Specific Plan)

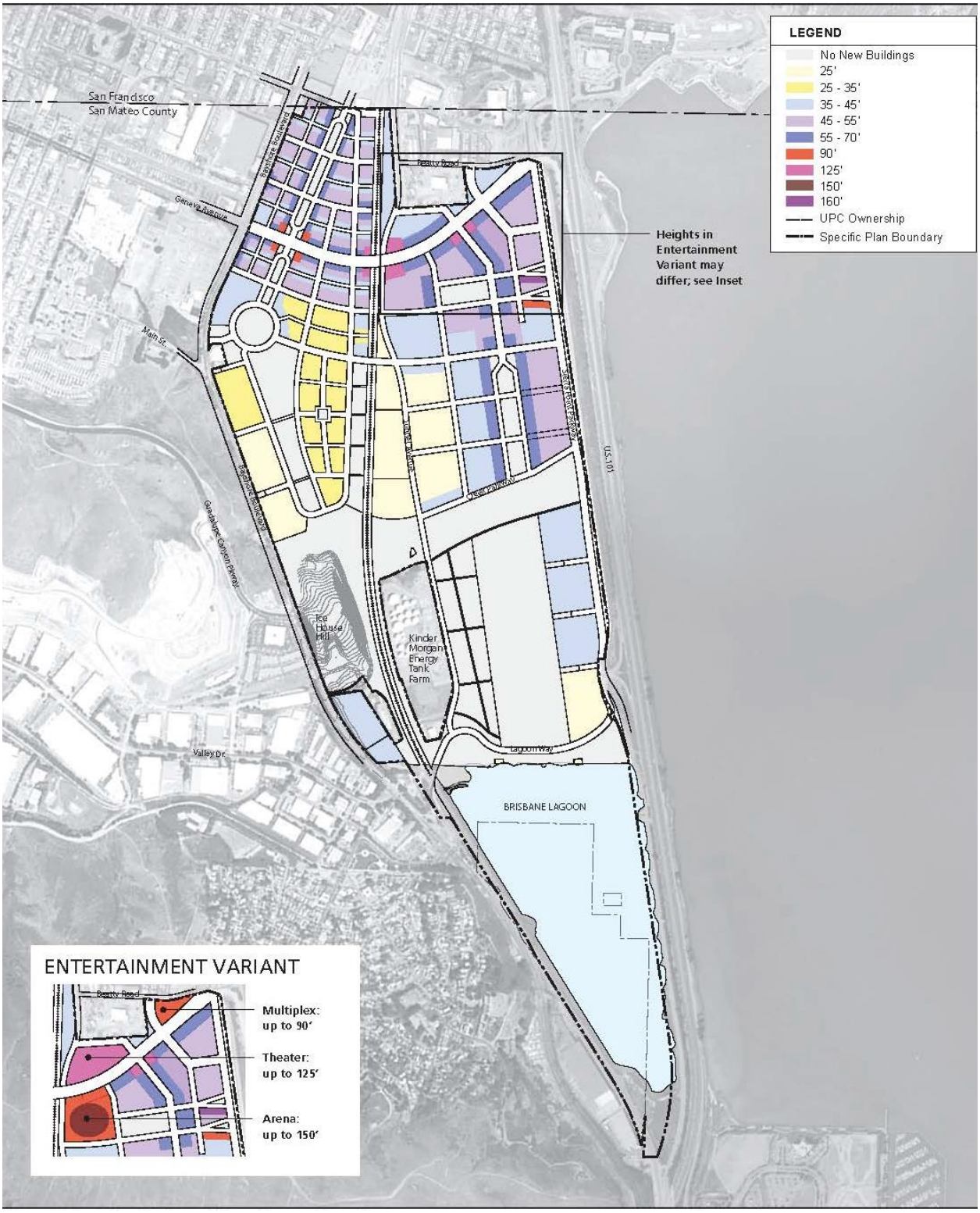
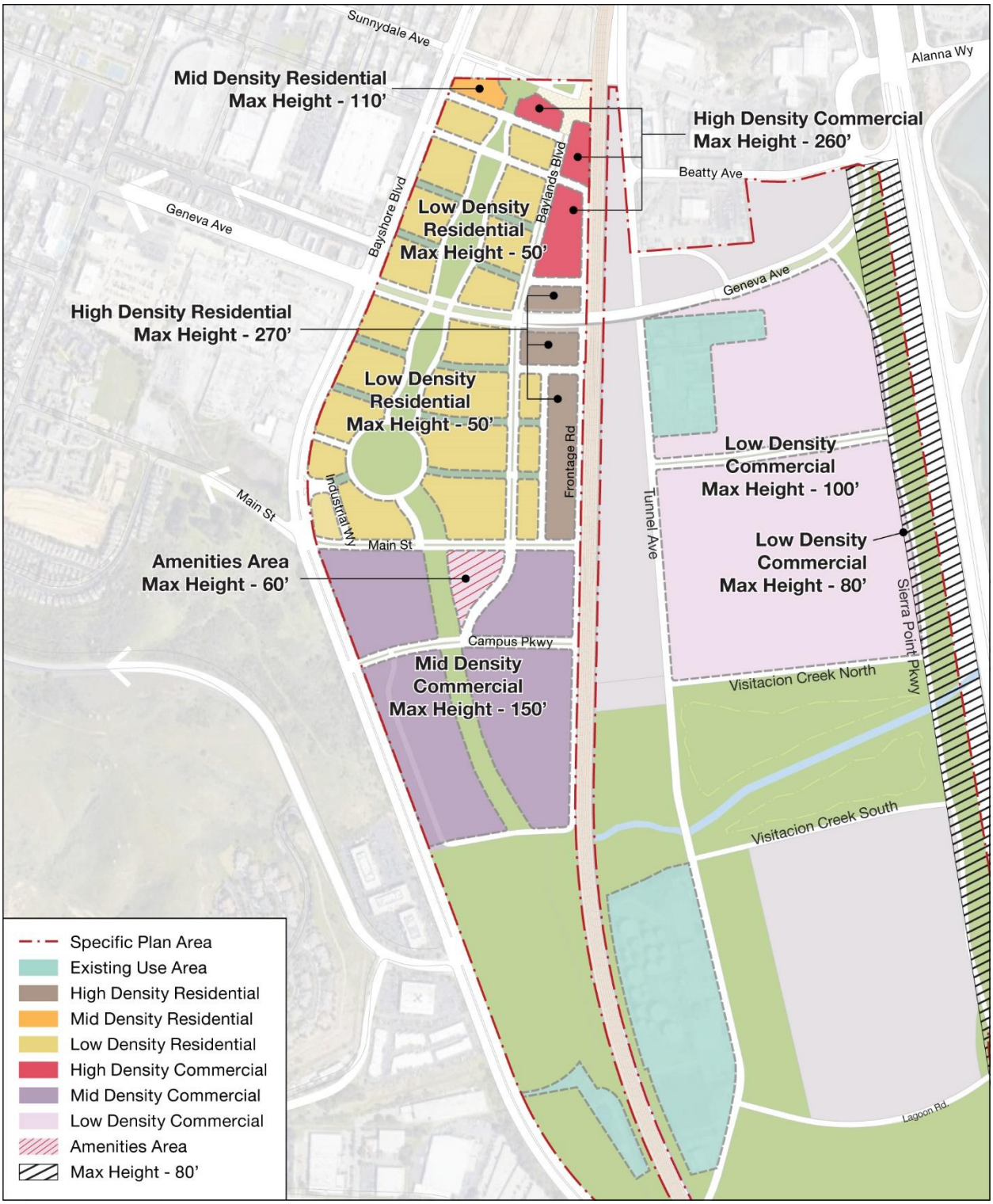


Figure 9-2b: Maximum Building Heights Analyzed in this EIR (2025 Specific Plan)



9.2.2 COMPARISON OF THE CONCEPT PLAN SCENARIOS ANALYZED IN THE PROGRAM EIR TO THE 2025 SPECIFIC PLAN

As noted in Chapter 2, the Program EIR analyzed four Concept Plans for the development of the Baylands at an equal level of detail:

- ***Developer-Sponsored Plan (DSP).*** This scenario represented the 2011 *Draft Brisbane Baylands Specific Plan*; encompassed a 684-acre area; and proposed 4,434 residential units, approximately 7 million sf of office/retail/industrial/institutional uses, approximately 169.7 acres of "open space/open area," and approximately 135.6 acres of "lagoon" area.
- ***Developer-Sponsored Plan – Entertainment Variant (DSP-V).*** This scenario emphasized entertainment-oriented uses by proposing a sports arena, concert venue, multiple-screen cinema, and additional conference/exhibition space and hotel rooms rather than the retail and office/R&D uses proposed in the DSP scenario for the northeastern portion of the site. DSP-V development also proposed 4,434 residential units.
- ***Community Proposed Plan (CPP).*** The CPP scenario did not include residential development and proposed approximately 7.7 million s.f. of office, industrial, commercial, and institutional uses, along with approximately 330 acres of open space/open area and the 135.6-acre lagoon. In addition to the 684-acre area included in the DSP scenario, the CPP scenario included the Recology site and adjacent roadway rights-of-way for a total area of 733 acres.
- ***Community Proposed Plan – Recology Expansion Variant (CPP-V).*** The 733-acre CPP-V scenario proposed a substantial expansion of the existing Recology facility within the Baylands from 260,000 s.f. to 1,011,000 s.f., replacing the hotel and R&D uses proposed in the CPP scenario within the area north of Geneva Avenue and east of Tunnel Road.

The land uses proposed for each of these scenarios are summarized and compared to the 2025 Specific Plan project in **Table 9-2**, below.

Table 9-2: Comparison of the Projects Analyzed in the Baylands Program EIR and Specific Plan EIR

	Program EIR Concept Plan Scenarios				2025 Specific Plan Project	GP-1-18/Measure JJ
	DSP	DSP-V	CPP	CPP-V		
Project Acreage	684.0 acres	684.0 acres	733.0 acres	733.0 acres	680.1 acres	684.0 acres
Proposed Land Use						
Residential	4,434 d.u.	4,434 d.u.	None	None	2,200 d.u.	1,800 to 2,200 d.u.
Commercial	6,713,000 s.f.	7,440,200 s.f.	7,676,000 s.f.	5,948,900 s.f.	6,500,000 s.f.	Up to 6,500,000 s.f.
Office/R&D	6,118,500 s.f.	6,090,300 s.f.	5,209,200 s.f.	4,874,000 s.f.	6,397,800 s.f.	
Retail	566,300 s.f.	283,400 s.f.	—[a]	—[a]	102,200 s.f.	
Entertainment	28,200 s.f.	1,066,500 s.f.	1,074,500 s.f.	1,074,500 s.f.		
Hotel	261,300 s.f. 329 rooms	586,800 s.f. 719 rooms	1,392,300 s.f. 1,990 rooms	1,046,100 s.f. 1,500 rooms	500,000 s.f. 800 rooms	500,000
Industrial	142,500 s.f.	142,500 s.f.	469,100 s.f. b	1,074,500 s.f.	None	None
Max. Building Height						
Residential	125 feet	125 feet	—	—	270 feet	Not Specified
Commercial	170 feet	160 feet	160 feet	160 feet	260 feet	
Non-Residential Development						
West of Caltrain	3,962,500 s.f.	3,088,700 s.f.	4,982,150 s.f.	4,982,150 s.f.	4,500,000 s.f.	Not Specified
East of Caltrain	3,125,000 s.f.	4,351,500 s.f.	4,555,250 s.f.	4,555,250 s.f.	2,500,000 s.f.	
Total	7,118,800 s.f.	7,440,200 s.f.	9,537,400 s.f.	8,069,500 s.f.	7,000,000 s.f.	
Socioeconomic Characteristics						
Population	9,888 residents	9,888 residents	—	—	4,905 residents	Not Specified
Employment	17,540 employees	15,466 employees	16,187 employees	16,069 employees	19,480 employees	
Open Space/Area						
Total Land Area	168.0 acres	168.0 acres	330.0 acres	330.0 acres	157.0 acres	25 percent
Park Land	92.0 acres	92.0 acres	—	—	64.8 acres	Not Specified

NOTES:
a. Retail square footage is included in Office/R&D to reflect mixed-use development.
b. Includes 66,600 s.f. of new industrial development, existing industrial along Industrial Way to remain (142,500 s.f.), and existing Recology uses to remain at is main facility (260,000 s.f.).
c. Includes 66,600 s.f. of new industrial development, existing industrial along Industrial Way to remain (142,500 s.f.), and expansion of the Recology main facility to 1,011,000 s.f.

9.2.3 COMPARISON OF THE 2025 SPECIFIC PLAN PROJECT TO GENERAL PLAN AMENDMENT GP-1-18/MEASURE JJ

Compared to the approved GP-1-18/Measure JJ, the 2025 Specific Plan project:

- Proposes the maximum number of dwelling units (2,200), commercial square footage (6.5 million), and hotel square footage (500,000 permitted by GP-1-18/Measure JJ.
- Realigns Lagoon Road to serve as a through route from Bayshore Boulevard connecting directly to the US 101 freeway southbound on- and off-ramps within the Baylands.
- Eliminates wind energy generation and doubles the minimum requirement for onsite renewable energy generation from 42,400 MWh to 85,000 MWh.
- Adds development of a 250 MW utility-scale battery storage facility, distributed battery storage, onsite switching substation, and distributed battery storage within the Baylands, along with an underground gen-tie line and improvements at the PG&E Martin Substation to connect the Baylands electrical system.
- Retains the existing lumber yard in its current location rather than moving it to another location within Baylands. The 2025 Specific Plan designates Golden State Lumber's main facility as an "Existing Use Area."
- Modifies the proposed water supply for the Baylands by establishing the California Water Service Company (Cal Water) as the water agency for the Baylands, Sierra Point, and Beatty areas, which would make water now being provided by the City to those areas available for buildout of the balance of the City.
- In exchange for the provision of potable water supply by Cal Water, the proposed Baylands water recycling facility would be doubled in size to provide up to 0.43 million gallons per day of recycled water for irrigation purposes to Cal Water for use within its South San Francisco District, requiring approximately 5.5 miles of offsite recycled water line construction.
- Eliminates site remediation and landfill closure as part of the project since they have undergone environmental review based been approved by state and county regulatory agencies.
- Adds a "Bayshore Boulevard Mobility Plan" to implement General Plan Amendment GP-1-19, which called for development of a plan to enhance mobility for Brisbane residents and reduce regional through traffic Bayshore Boulevard.
- Adds relocation of Brisbane's existing fire station and establishes a second fire station within the Baylands to implement performance criteria for emergency response to fires established in the Program EIR.

- Provides a grade 6–8 middle school within the Baylands rather than the previously proposed elementary or charter high school.

9.3 SUBSEQUENT EIR ANALYSES

The Subsequent EIR analyses set forth in the tables below compare the significance conclusions of each impact analyzed in the Baylands Program EIR and Specific Plan EIR. The first column of these tables summarizes the impact conclusions of the Program EIR. Based on the analyses presented in Chapter 4, the second column of these tables evaluates whether the 2025 Specific Plan project would result in either (1) a new significant impact that was not previously identified in the Program EIR or a (2) a substantially more-severe significant impact than was identified in the Program EIR.

9.3.1 LAND USE AND PLANNING POLICY[413]

Table 9-3: Program EIR and Subsequent EIR Land Use and Planning Policy Significance Conclusions

Program EIR Significance Conclusions	Subsequent EIR Significance Conclusions
Physically Divide an Existing Community **No Impact** The Program EIR determined that detailed analysis as to whether Baylands development would physically divide or create a physical barrier to an established community need not be undertaken because (1) the Baylands was already physically divided from the rest of the Brisbane community and surrounding lands by Bayshore Boulevard, the Recology facility, and Brisbane Lagoon; (2) there was no existing community within the Baylands; and (3) the Baylands was already divided into east and west areas by the Caltrain rail line.	**Impact LUP-1: Physically Divide an Existing Community** **Subsequent EIR Finding. A New Significant Impact Would Result from Substantial Changes to the Project:** • **Increased need for temporary lane closures that would reduce connectivity.** No new physical barriers to mobility would be constructed, nor would existing connectivity be substantially diminished as the result of construction traffic. The Specific Plan would enhance mobility by extending Geneva Avenue to the US 101 freeway providing safe turning movements for Brisbane residents and businesses onto and from Bayshore Boulevard along with enhanced pedestrian and bicycle facilities. However, the planned realignment of Lagoon Road, construction of offsite recycled water lines, and the Bayshore Mobility Plan, which were not addressed in the Program EIR, would result in temporary partial or complete lane closures along Lagoon Road, Sierra Point Parkway, Bayshore Boulevard, and/or Airport Boulevard (City of South San Francisco) that would temporarily reduce connectivity. Because the Program EIR concluded that no land use connectivity impacts would occur, roadway lane closures during construction represent a new significant land use and policy impact. Mitigation Measures LUP-1a (Program EIR Transportation Mitigation Measure 4.N-12) and MM LUP-1b reduce this impact to less than significant.
Impact 4.I-1: Conflict with an Applicable Land Use Plan or Policy **Significant but Mitigable** The Program EIR identified inconsistencies of the four scenarios it analyzed with several provisions of the City's General Plan, including prohibitions on residential development and exceeding the permitted development intensity for the Baylands subarea, exceeding roadway level of service standards, and other issues.	**Impact LUP-2: Conflict with an Applicable Land Use Plan or Policy** **Subsequent EIR Finding. A New Significant Impact Would Result from Changed Circumstances:** • **Inconsistency with MTC's Transit-Oriented Communities Policy Resolution No. 4530, which was adopted subsequent to Program EIR analysis.**

[413] The regulatory context for Baylands development in relation to Land Use and Planning Policy is presented in Section 4.3.3. Relevant Specific Plan provisions are presented in Section 4.3.4.

Program EIR Significance Conclusions	Subsequent EIR Significance Conclusions
	Adoption of General Plan Amendments GP-1-18[414] and GP-1-19[415] resolved the General Plan inconsistencies identified in the Program EIR, including both those that would and would not result in physical environmental impacts. The 2025 Specific Plan would be inconsistent with the Metropolitan Transportation Commission's (MTC) Transit-Oriented Communities Policy (Resolution No. 4530) because it would permit (1) residential development types with an average density below 25 units per acre and not require sufficient affordable housing within ½ mile of the Bayshore Caltrain station, and (2) lower density housing to exceed the maximum parking space standards included in Resolution No. 4530, and not requiring a minimum average floor area ration of 2.0 within ½ mile of the Bayshore Caltrain station. Because MTC's Transit-Oriented Communities Policy is intended to reduce mobile source emissions, inconsistency with this policy would exacerbate the Specific Plan's significant air quality and GHG emissions impacts and represent a new significant impact. Implementation of Mitigation Measure MM LUP-2 would achieve consistency with MTC's Transit-Oriented Communities Policy and reduce this impact to less than significant.

9.3.2 POPULATION AND HOUSING[416]

Table 9-4: Program EIR and Subsequent EIR Population and Housing Significance Conclusions

Program EIR Significance Conclusions	Subsequent EIR Significance Conclusions
Impact 4.K-1: Induce Substantial Growth **Significant and Unavoidable** The 2011 Specific Plan and its variant proposed 4,434 dwelling units which would generate an onsite population of 9,888 and exceed ABAG's projected citywide population growth (3,418).	**Impact SOC-1: Induce Substantial Unplanned Growth** **Subsequent EIR Finding. Substantial Changes to the Project and Circumstances Indicate a Previously Identified Significant and Unavoidable Impact Would Now Be Less than Significant:** • **Revised land use development program.** • **Adoption of Regional Housing Needs Allocation, Brisbane Housing Element, and General Plan growth housing and commercial projections for the Baylands in GP-1-18/Measure JJ.**

[414] General Plan Amendment GP-1-18 set development standards for any Specific Plan prepared for Baylands development. Inconsistencies with many of the policies established in General Plan Amendment GP-1-18 could constitute significant environmental impacts.

[415] General Plan Amendment GP-1-19 modified roadway performance standards. Included in General Plan Amendment GP-1-19 was a requirement for a mobility plan for Bayshore Boulevard that is being prepared concurrent with the City's planning and environmental review of the Baylands Specific Plan. Also included in General Plan Amendment GP-1-19 are performance standards related to roadway safety and a requirement that any Specific Plan for the Baylands be consistent with the 10 sustainability principles outlined in the City's Sustainability Framework for the Brisbane Baylands.

[416] The regulatory context for Baylands development in relation to Population and Housing is presented in Section 4.4.3.

Program EIR Significance Conclusions	Subsequent EIR Significance Conclusions
In addition, the Baylands development scenarios analyzed in the Program EIR would generate 15,500 to 17,500 onsite jobs, each exceeding ABAG's projected citywide employment growth (9,880). The various scenarios analyzed in the Program EIR were determined to be capable of accommodating a substantial portion of the housing and employment projected by ABAG for Brisbane and surrounding cities although each scenario would greatly exceed ABAG projections for Brisbane. The impact of exceeding housing and employment projections was found to be manifested in the project's significant unavoidable traffic and air quality impacts. Because no feasible mitigation measures to bring project buildout into line with ABAG projections for Brisbane were available other than increasing ABAG projections for the San Francisco/San Mateo Bi-County PDA within Brisbane or substantially reducing buildout rand approving a project alternative, the impact was determined to be significant and unavoidable.	• **Revised CEQA Guidelines focusing on impacts of inducing unplanned growth rather than any growth.** After certification of the Program EIR, CEQA Guidelines were revised to focus the population and housing analysis of growth inducement on unplanned growth. In contrast, the Program EIR evaluated the environmental effects of all growth the project might induce, whether planned or unplanned. Growth associated with the 2025 Specific Plan project would be consistent with the Brisbane General Plan (1,800 to 2,200 dwelling units, 6.5 million square feet of commercial use, and an additional 500,000 square feet of hotel use). Thus, direct population and employment growth associated with the Baylands Specific Plan would constitute planned rather than unplanned growth, which would not constitute a significant impact. Planned Baylands residential development intensities and building types would provide the opportunity to meet RHNA objectives for the production of housing to meet the housing needs of all economic segments of the community. The estimated 19,480 jobs that would result from Specific Plan buildout would be associated with approximately 14,537 households. The 2020 Census, reports that 59.8 percent of Brisbane residents were employed within San Mateo County. Although the 2020 Census does not report the number of Brisbane residents employed within Brisbane, past demographics reports indicate that about 15 percent of employed Brisbane residents held jobs in the City, Brisbane residents working in the City held about five percent of the jobs in Brisbane, and residents of other San Mateo County cities and San Francisco held most of Brisbane's jobs. Thus, it is reasonable to project that the work force for increased Baylands employment would primarily be drawn from residents of San Francisco and San Mateo counties. Baylands roadway, water, sewer, drainage, and utilities infrastructure would serve *planned* rather than *unplanned* growth. Specific Plan infrastructure capacity is designed to (1) serve the Baylands, (2) mitigate the effects of Baylands development on existing infrastructure, and/or (3) provide recycled water to planned land uses within the California Water Company's service area in the City of South San Francisco.[417] In addition, major transportation improvements that are part of bi-county transportation planning efforts would be designed and constructed in accordance with regional growth projections.

[417] See Baylands Water Supply Assessment is provided in EIR Appendix P.

Program EIR Significance Conclusions	Subsequent EIR Significance Conclusions
Displace Substantial Numbers of People **No Impact** Because no housing exists within the Baylands, the displacement of housing was not addressed in the Program EIR. The Program EIR also did not address physical environmental effects associated with displacement of Baylands businesses along Industrial Way.	**Impact POP-2: Need for Replacement Housing or Commercial/Industrial Buildings Summary** **Subsequent EIR Finding. No New Significant Impact Would Result** There is no existing housing within the Baylands, and no replacement housing would be needed. Approximately 231,400 square feet of existing Baylands industrial businesses would be displaced by Specific Plan grading and development. However, because over 6.3 million s.f. of industrial building area was vacant within San Francisco and San Mateo counties, over 2.6 million s.f. of which was located within Brisbane and adjacent communities, construction of new buildings to accommodate displaced businesses would not be needed. Off-site Baylands-related infrastructure would be located within existing roadway rights-of-way, thereby avoiding displacement of adjacent offsite residential and non-residential uses.
Not addressed in the Program EIR.	**Impact POP-3: Housing for all Economic Segments of the Community** **Subsequent EIR Finding. No New Significant Impact Would Result** Adoption of the Baylands Specific Plan would provide zoning at appropriate densities to provide housing opportunities and facilitate meeting the City's quantified objectives for the production housing for all economic segments of the community. Site remediation, grading, and installation of infrastructure is projected to be completed on a schedule consistent with the City's Regional Housing Needs Allocation by the end of 2031.
Not addressed in the Program EIR.	**Impact POP-4 Urban Decay** **Subsequent EIR Finding. No New Significant Impact Would Result** Specific Plan development is proposed to occur in phases and be driven by market conditions and tenant demand. The existing inventory of space in Brisbane and South San Francisco has a highly concentrated ownership pattern, with large, experienced companies controlling most of the space, which suggests that these landlords have the wherewithal to successfully maintain, market, and re-tenant vacancies should tenant movement to the Baylands occur. The Specific Plan's 4,905 residents, 19,480 on-site employees, and Baylands businesses would generate approximately $298.9 million in brick-and-mortar spending by Baylands residents and daytime spending by Baylands employees and hotel guests annually. In comparison, $33.1 million in retail sales would be generated annually by 91,980 square feet of Baylands retail space, representing approximately 11.5 percent of the retail sales generated by the Specific Plan's residents, employees, and hotel guests at full buildout. Thus, if Baylands development would divert any sales away from existing retailers, other sales support would be available to backfill those diverted sales. The Specific Plan would not therefore cause a downward spiral of business closures and multiple long-term vacancies of retail spaces.

9.3.3 AESTHETIC AND VISUAL RESOURCES[418]

Table 9-5: Program EIR and Subsequent EIR Aesthetic and Visual Resources Significance Conclusions

Program EIR Significance Conclusions	Subsequent EIR Significance Conclusions
Impact 4.A-1: Impacts on Scenic Vistas **Significant but Mitigable** Each development scenario analyzed in the Program was found to block or partially block views of scenic vistas, including San Bruno Mountain and the San Francisco Bay, resulting in substantial adverse effects on a scenic vista. Program EIR Mitigation Measure 4.A-1 required that buildings within 350 feet of US Highway 101 be no taller than 80 feet in height.	**Impact AES-1: Adverse Effects on a Scenic Vista** **Subsequent EIR Finding. A Substantially More Severe Significant Impact Would Result from Substantial Changes to the Project:** • **Increased maximum building heights blocking scenic vistas.** Substantial changes were made to the project, including increasing maximum residential and commercial office building heights in the western portion of the Baylands and placement of 20+ story buildings along the west side of the Caltrain right-of-way. Updated visual simulations and analysis determined that the 2025 Specific Plan project would impede scenic views of San Francisco Bay, Brisbane Lagoon, and San Bruno Mountain from several public viewpoints even with implementation of Program EIR Mitigation Measure 4.A-1, resulting in a substantially more severe impact than was disclosed in the Program EIR. In addition to Program EIR Mitigation Measure 4.A-1 (numbered MM AES-1a in this document), Mitigation Measure MM AES-1b would limit development within the western portion of the Baylands to 12 stories (or 150 feet) for office buildings and 8 stories (or 100 feet) for residential buildings. These two mitigation measures would ensure that public views of San Bruno Mountain and its ridgelines, the San Francisco Bay, and the Brisbane Lagoon would not be substantially blocked.
Impact 4.A-2: Impacts on Scenic Resources **Less than Significant** None of the concept plan scenarios would substantially damage scenic resources, including but not limited to trees, rock outcroppings, hillsides, and historic buildings.	**Impact AES-2: Physical Effects on Scenic Resources** **Subsequent EIR Finding. A New Significant Impact Would Result:** • **Construction of trails on Icehouse Hill would require manufactured slopes typically up to 6 to 10 feet high, with higher, more visually prominent slopes.** Substantial changes were made to the project, including revised plans for Icehouse Hill, Visitacion Creek, and Lagoon Park, along with a substantial increase in acreage devoted to renewable energy production and a realignment of Lagoon Road. The Specific Plan provides for preservation and improvement of existing scenic resources within Visitacion Creek and along the north shore of the Brisbane Lagoon, including restoration of wetland and habitat areas. Habitat areas on Icehouse Hill would be preserved, and the relocated Mission Blue Nursery would be located on an existing flat pad and use an existing access road. A significant impact would nevertheless result since trails on Icehouse Hill would require manufactured slopes, the physical environmental effects of which were not explicitly analyzed in the Program EIR in relation to effects on scenic resources. These trails would typically be up to 6 to 10 feet high, with higher, more visually prominent slopes constructed

[418] The regulatory context for Baylands development in relation to Aesthetic and Visual Resources is presented in Section 4.5.3. Relevant Specific Plan provisions are presented in Section 4.5.4.

Program EIR Significance Conclusions	Subsequent EIR Significance Conclusions
	where trails would traverse along steep hillsides. Newly constructed trails on Icehouse Hill would thus be seen as long "ribbons" of disturbed bare ground. Mitigation Measure MM AES-2 would ensure that Icehouse Hill trails minimize site grading and resulting visual impacts. Biological Resources Mitigation Measures MM BIO-1a through MM BIO-1c would minimize removal of natural vegetation. With implementation of these measures, Icehouse Hill, the Visitacion Creek corridor, and the north shore of Brisbane Lagoon would retain a natural character and therefore not degrade the scenic resource.
Impact 4.A-3: Visual Character[419] **Significant but Mitigable** Each development scenario analyzed in the Program EIR was determined to be substantially greater in intensity than existing surrounding development. While such development would not substantially degrade the existing visual character of the Baylands site (former railyard and landfill), the Program EIR concluded that the substantial difference between the intensity of proposed Project Site development and that of its surroundings would substantially degrade the surrounding area's visual character. Mitigation Measure 4.A-3 established urban design performance standards to be incorporated into Specific Plan design guidelines.	**Impact AES-3: Consistency with Visual Quality Policies and Programs** **Subsequent EIR Finding. A Substantially More Severe Significant Impact Would Result from Substantial Changes to the Project:** • **Increased maximum building heights and solid masses of buildings blocking views.** The 2024 Specific Plan incorporated design guidelines as required by Program EIR Mitigation Measure 4.A-3. Baylands development would urbanize the Baylands with substantially greater development intensity and buildings that are taller, larger, and more abundant and closely spaced than the surrounding area. It also proposes increasing the maximum residential building height from 125 feet to 270 feet to provide for construction of 20+ story residential towers along the Caltrain rail line. These towers would be the tallest buildings within Brisbane and adjacent developed areas in Daly City and San Francisco. The 2025 Specific Plan also proposes reducing commercial acreage and building square footage, which would increase the intensity of commercial development (133.3 acres, 6.5 million s.f., 1.21 FAR) compared to the 2011 Specific Plan (150 acres, 6.7 million s.f., 1.02 FAR). In comparison, the Program EIR also analyzed impacts of two non-residential concept plan scenarios that proposed up to 7.7 million square feet of commercial office use on approximately 135 acres (1.31 FAR). The result, as described above, is that development would impede scenic views of San Francisco Bay, Brisbane Lagoon, and San Bruno Mountain from several public viewpoints even with implementation of Program EIR mitigation measures. Proposed mitigation measures for Impacts AES-1 and AES-2 would reduce impacts related to loss of public views and require screening of infrastructure facilities along the north side of Geneva Avenue, thereby achieving consistency between the Specific Plan and the visual quality related General Plan policies and programs.
Impact 4.A-4 Light and Glare **Significant and Unavoidable** The Program EIR concluded that each development scenario would create substantial new sources of nighttime lighting from streets, buildings, parking lots, and other outdoor activity areas.	**Impact AES-4: New Sources of Substantial Light** **Subsequent EIR Finding. Substantial Changes to Circumstances Indicate a Previously Identified Significant and Unavoidable Impact Can Now Be Reduced to Less than Significant:** • **Adoption of the City's Dark Sky Ordinance provides a new basis for performance standards and mitigation.**

[419] Subsequent to certification of the Program EIR, the CEQA Guidelines Appendix G question related to visual quality was substantially revised. As a result, the Program EIR analyzed the extent to which Baylands development would substantially degrade the existing visual character of the Baylands site and its surroundings. In comparison, this EIR analyzes whether the 2025 Specific Plan project would conflict with applicable plans, regulations, and policies governing scenic quality. As a result, the Program EIR and 2025 Specific Plan EIR only indirectly address the same issues.

Program EIR Significance Conclusions	Subsequent EIR Significance Conclusions
The Program EIR proposed Mitigation Measure 4.A-4a to address nighttime lighting by establishing a series of performance standards that primarily addressed light trespass. The Program EIR concluded that a significant and unavoidable impact would result even with implementation of this measure, "primarily given the level of nighttime lighting levels typical of the proposed uses (especially the entertainment-oriented uses proposed in the DSP-V scenario that would involve prominent, lighted displays), compared to the minimal nighttime lighting that currently exists on the Project Site, and the existence of nearby surrounding nighttime-light-sensitive uses (residences) that would be affected."	Subsequent to the certification of the Program EIR and adoption of Mitigation Measure 4.A-4a to address nighttime lighting impacts, the City adopted Municipal Code Chapter 15.88, Dark Sky Ordinance, to establish quantitative standards that reduce nighttime lighting impacts while providing the lighting necessary to ensure community safety and security. These standards include provisions to limit the amount of lighting within site-specific development projects, which were not required in Program EIR Mitigation Measure 4.A-4a. While Section 3.8 of the 2025 Specific Plan prohibits some but not all sources from having light emitted above 90 degrees, nighttime lighting would be permitted to be projected above the horizontal plane from the bottom of the lamp, which would be inconsistent with Municipal Code Chapter 15.88 and contribute to a significant sky glow impact. Development permitted by the Baylands Specific Plan would generate nighttime lighting over the broad area that is currently largely dark at night as was analyzed in the Program EIR. In relation to the light trespass that such lighting would cause, the 2025 Specific Plan incorporates the performance standards set forth in Program EIR Mitigation Measure 4.A-4a but omits requirements for lighting master plans and photometric analyses of site-specific development projects included in that measure. This EIR therefore proposes Mitigation Measure AES-4a to restore those provisions. Mitigation Measure MM AES-4b ensures compliance with Municipal Code Chapter 15.88, Dark Sky Ordinance, and provides additional requirements to reduce the adverse effects of nighttime lighting on the area's dark night sky to less than significant with mitigation incorporated.
Impact 4.A-4: Daytime Glare **Significant but Mitigable** The Program EIR concluded that each development scenario would create substantial new sources of daytime glare as part of onsite buildings. Program EIR Mitigation Measure 4.A-4b was adopted, setting performance standards for reflective materials on building façades to reduce glare impacts to less than significant.	**Impact AES-5: Daytime Glare** **Subsequent EIR Finding. New and Substantially More Severe Impacts Would Result from Substantial Changes to the Project:** • **Requirement to provide glare-producing roof materials as an energy conservation measure.** • **Glare from above-ground infrastructure, signage, and public art installations.** The 2025 Specific Plan includes new provisions that explicitly require glare-producing reflective roof materials. While proposed as a means of reducing building heat gain, this requirement conflicts with Program EIR Mitigation Measure 4.A-4b and would result in a significant glare impact, particularly in the early morning and late afternoon hours. Updated analysis of glare impacts provided in Chapter 4 also indicates that a significant glare impact would result even with Program EIR Mitigation Measure 4.A-4b due to highly reflective stainless-steel piping and cladding on above-ground infrastructure, as well as from the placement of reflective materials on signage and outdoor public art installations. In addition, updated analysis in Chapter 4 indicates that concave surfaces can concentrate reflective light, and reflective façade materials that slope back from the ground surface at less than a 90-degree angle can reflect high angle sunlight along the ground surface. Thus, Mitigation Measure MM AES-5b is proposed to supplement MM AES-5a (Program EIR Mitigation Measure 4.A-4b) and reduce impacts to less than significant.

9.3.4 BIOLOGICAL RESOURCES[420]

Table 9-6: Program EIR and Subsequent EIR Biological Resources Significance Conclusions

Program EIR Significance Conclusions	Subsequent EIR Significance Conclusions
Impact 4.C-1: Impacts to candidate, sensitive, or special-status plants or animals **Significant but Mitigable** The Program EIR concluded that Project Site development would have a substantial adverse effect on candidate, sensitive, or special-status plant and wildlife species, not only from site grading, but also from construction of trails on Icehouse Hill, discouragement of use of habitat areas due to the close presence of human activities and bird and bat strikes on wind turbines and buildings. Impacts to habitat for special status fish species would occur at the lagoon and Visitation Creek as the result of introducing sediment and other materials such as litter or refuse generated during Project Site construction and operation. Mitigation Measures 4.C-1a through 4.C-1d provided requirements for pre-construction surveys and performance standards contained in those measures that would reduce impacts to a less than significant level and were carried forward from the Program EIR. Mitigation measures 4.C-1e and 4.C-1f addressed impacts from wind turbines that are no longer proposed. These measures were, therefore, not carried forward from the Program EIR. Mitigation measures 4.C-1g, 4.H-1a, 4.H-1b, 4.H-4 were proposed requiring compliance with Storm Water Pollution Prevention Program (SWPPP) and Provision C.3 regulatory requirements. In response to Program EIR Mitigation Measure 4.C-4a, which calls for preparation of a project-wide "Open Space Plan," and Mitigation Measure 4.C-4b, which calls for preparation of a "Marsh Wildlife and Habitat Protection Plan," the 2025 Specific Plan provides for extensive habitat restoration and enhancement within Visitacion Creek, along the north shore of the lagoon, and on Icehouse Hill. The Specific Plan also proposes an "Ecological Park" and provides trails and recreational concept plans for each	**Impact BIO-1: Impacts to candidate, sensitive, or special-status plants or animals** **Subsequent EIR Finding. New and Substantially More Severe Significant Impacts Would Result from Substantial Changes to the Project:** • **Icehouse Hill trails plan.** • **Potential listing of large marble butterfly.** *Rare Plants.* The 2025 Specific Plan provided a new plan for construction of trails on Icehouse Hill and proposed increased recreation-related activities that would cause adverse effects on special status plants on Icehouse Hill. In addition, Program EIR Mitigation Measures 4.C-1a and 4.C-1b did not provide explicit performance standards that would apply to plant restoration sites. *Butterflies.* The construction of trails and recreational facilities at Icehouse Hill, and planned management activities in this area have the potential to cause direct or indirect adverse effects on Callippe silverspot butterfly or Bay checkerspot butterfly host plants. Project activities, including general site clearing and grubbing in preparation for construction, have the potential to encounter large marble butterfly adults or larvae on weedy mustard plants that grow sporadically throughout the Specific Plan area, the effects of which were not analyzed in the Program EIR. While the butterfly does not have protected status, should a recent petition to federally list the large marble butterfly be adopted, the species would be recognized as a special-status species and project-related disturbances within its preferred habitat of invasive radish and mustards would be considered to be a significant impact. *Nesting Birds.* Grading or ground disturbance activities associated with site development have the potential to encounter protected nesting birds, particularly between February 1 to August 31. Construction activities within the Specific Plan area have the potential to impact nesting birds. Night lighting would not exceed the performance standards established in Section 4.5, *Aesthetic and Visual Resources*, and therefore would not have a significant direct or indirect impact on wildlife resources. *Mammals.* Sensitive bats may be encountered during the demolition and deconstruction of on-site buildings or during tree and vegetation removal. The injury of sensitive bats or destruction of active maternity roosts constitute a significant impact. Implementation of Mitigation Measures MM BIO-1a through MM BIO-1e would reduce impacts to less than significant.

[420] The regulatory context for Baylands development in relation to Biological Resources is presented in Section 4.6.3. Relevant Specific Plan provisions are presented in Section 4.6.4.

Program EIR Significance Conclusions	Subsequent EIR Significance Conclusions
of these areas, none of which were previously analyzed in the Program EIR.	Program EIR Mitigation Measures 4.C-1a and 4.C-1b (EIR Mitigation Measures MM BIO-1a, MM BIO-1b) did not provide explicit performance standards that would apply to plant restoration sites. Impacts related to rare plants. The Program EIR identified Mitigation Measure MM BIO-1c (Program EIR Mitigation Measure 4.C-1c) to identify, avoid, and protect rare butterflies and their habitat at Icehouse Hill. The measure required butterfly surveys and preparation of a Butterfly Protection Plan but also did not provide explicit performance standards related to long-term butterfly habitat management. Impacts to rare butterflies at Icehouse Hill would remain significant without additional performance assurances that were not identified in Mitigation Measure BIO-1c. Mitigation Measures MM BIO-1f and MM BIO-1g provide explicit performance standards for special-status plants and rare butterflies and would reduce impacts to a less-than-significant level. Mitigation Measure MM BIO-1h addresses the large marble butterfly and would avoid and mitigate impacts to this species should it become state or federally listed. Together, these mitigation measures ensure that impacts to special-status plants and wildlife species would be reduced to less than significant.

Program EIR Significance Conclusions	Subsequent EIR Significance Conclusions
Impact 4.C-2: Riparian Habitat **Significant but Mitigable** Project Site development would have a substantial adverse effect on riparian habitat resulting from proposed site remediation and grading operations and remove sensitive natural communities within the landfill and rail yard areas. Depending on timing of site-specific development, construction activities in the vicinity of restored sensitive natural areas wetlands constructed as mitigation such as runoff from development construction areas and increased human presence and noise would temporarily disturb adjacent habitat areas. Compliance with regulatory requirements and implementation of required mitigation measures would ensure no overall loss of either total area/amount or functions and values of sensitive natural communities and likely result in a greater quantity and higher overall quality than what exists at the site currently. **Impact 4.C-3: Jurisdictional Waters** **Significant but Mitigable** Project Site development would have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act through direct removal by grading for site remediation and development. Performance standards set forth in Mitigation Measure 4.C-2c ensure that the total area and/or overall functions and values of jurisdictional wetlands or waters of the U.S. would be preserved.	**Impact BIO-2: Freshwater and Tidally Influenced Habitats; Waters of the US and State; Areas Subject to State Lands or BCDC Jurisdiction** **Subsequent EIR Finding. A New Significant Impact Would Result from Substantial Changes to the Project:** • **Temporal loss of wetlands prior to implementation of habitat restoration and enhancement.** In response to Program EIR Mitigation Measure 4.C-4b, which calls for preparation of a "Marsh Wildlife and Habitat Protection Plan," the 2025 Specific Plan provides for extensive habitat restoration and enhancement within Visitacion Creek and along the north shore of the lagoon. Implementation of this plan would provide in-kind replacement of wetlands and non-wetland waters. While the Specific Plan's intention is to enhance Visitacion Creek and along the north shore of the lagoon to replace habitat lost due to site grading and development, resource agencies may not accept enhancement or mitigation actions located within the landfill footprint as mitigation and could require additional off-site mitigation. In addition, the Specific Plan's proposed phasing of habitat restoration improvements in relation sensitive natural community disturbance at Visitacion Creek and the north shore of Brisbane Lagoon could result in a temporal gap as long as 10-12 years between the impacts and site restoration. Even with in-kind replacement, there would be a temporal loss of wetlands between the time the landfill is capped and before wetland features required by the Specific Plan are provided, which was not addressed in the Program EIR. Specific Plan requirements for physical barriers, such as cyclone fencing or equivalent screening, to be maintained along with educational signage for trails within and adjacent to areas of wetlands and non-wetland waters, would reduce impacts associated with human encroachment. Changes to the project's phasing program would lead to a temporal gap between the removal of vegetation along Visitacion Creek and the north shore of the Lagoon and installation of habitat improvements required by the Specific Plan within those areas. Mitigation Measure BIO-2f requires final grading of those areas to be completed within 2 years of initial site disturbance, which would avoid the need to remove wetland species that naturally returned after site grading to be removed when the habitat and park improvements are installed, which could be as long as 10 years after existing vegetation is removed. This would reduce a new significant temporal impact to less than significant. In addition, trails within the wetland portions of Visitacion Creek and Lagoon Park would be provided on raised platforms, resulting in minimal effects on habitat areas.

Program EIR Significance Conclusions	Subsequent EIR Significance Conclusions
Impact 4.C-4: Fish and Wildlife Movement **Significant but Mitigable** The Program EIR concluded that Project Site development would restrict movement of wildlife species (primarily avian species) through the construction and lighting of mid-rise buildings that would directly restrict movement (collision impacts) and hinder nighttime navigation as the result of Project Site lighting. Program EIR Mitigation Measure 4.C-4a required preparation of a Project wide Open Space Plan to be prepared by a landscape architect in coordination with a qualified habitat restoration biologist. In addition, Mitigation Measure 4.C-4b required preparation of an "Open Space Plan." The plans required by these measures were incorporated into the 2025 Specific Plan. The physical environmental impacts of these plans were not evaluated in the Program EIR.	**Impact BIO-3: Fish and Wildlife Movement** **Subsequent EIR Finding. A Substantially More Severe Significant Impact Would Result from Substantial Changes to the Project and Information that was not Known and could not have been Known at the Time of the Program EIR:** • **Advancements in bird strike prevention science indicate Program EIR mitigation would not have been effective.** The implementation of the Specific Plan's habitat conservation and enhancement program will incorporate wildlife movement corridors into the site design and enhance existing high-quality habitat for native plant and wildlife species. Proposed habitat enhancements and mitigation measures for Icehouse Hill will enhance butterfly movement opportunities between Icehouse Hill and San Bruno Mountain and reduce impacts to less than significant. The Program EIR recognized the potential for impacts on migratory birds from night lighting and potential to collide with windows and reflective surfaces on tall buildings associated with development of the site, a potentially significant impact, and proposed mitigation to reduce the magnitude of the impact. However, significant advancements have been made in the understanding of bird hazards, such as the need for protection measures for buildings less than 100 feet in height, and methods to reduce bird collision risks subsequent to Program EIR certification. In addition, the 2025 Specific Plan proposes to substantially increase maximum allowable building heights within the Baylands. The result is that Program EIR Mitigation Measure 4.C-3c would not sufficiently minimize bird strike impacts of the 2025 Specific Plan project to less than significant. The addition of Mitigation Measure BIO-3d would reduce bird strike impacts to less than significant.
Impact 4.C-5: Brisbane Tree Ordinance **Less than Significant** Because Project Site development would be required to comply with the provisions of the Brisbane Tree Ordinance, the Program EIR concluded that compliance with City ordinance would ensure the removal of trees for needed grading activities would be less than significant.	**Impact BIO-4: Brisbane Tree Ordinance** **Subsequent EIR Finding. No New Significant Impact Would Result** Specific Plan development would result in the **removal** of nearly all trees within the Baylands. Consistent with the City's tree ordinance, replacement trees would be provided at a minimum ratio of 1:1. Relocation of the City's existing fire station would also require removal of some existing trees at the relocation site. Such removed trees would be replaced at a 1:1 ratio to the extent possible given operational requirements for the relocated fire station.

Program EIR Significance Conclusions	Subsequent EIR Significance Conclusions
Impact BIO-6: San Bruno Mountain Habitat Conservation Plan **Less than Significant** Because the San Bruno Mountain Habitat Conservation Plan extends from San Bruno Mountain west of the site to Bayshore Boulevard and does not extend east of Bayshore Boulevard into the Baylands, the Program EIR stated that the Project is not required to comply with the Habitat Conservation Plan. In addition, the Program EIR found that Icehouse Hill would remain as open space and Baylands development would not conflict with the Habitat Conservation Plan.	**Impact BIO-5: San Bruno Habitat Conservation Plan** **Subsequent EIR Finding. A New Significant Impact Would Result from Substantial Changes to the Project:** • **Detailed restoration plan for Icehouse Hill.** • **Relocation of Mission Blue Nursery to the former shooting range on Icehouse Hill.** Restoration of Icehouse Hill would promote the goals of the Habitat Conservation Plan to conserve and restore listed butterflies by restoring Icehouse Hill in a manner that supports native plants, and particularly host and nectar plants for listed butterfly species. Adverse physical effects on Icehouse Hill habitat identified in Impact BIO-1, above, that would adversely affect implementation of the Habitat Conservation Plan would be mitigated by a combination of Specific Plan implementation and Mitigation Measure BIO-1c such that the Specific Plan would not conflict with the San Bruno Mountain Habitat Conservation Plan and would likely result in a potentially beneficial impact on achieving Habitat Conservation Plan goals relative to listed butterfly species. Relocation of Mission Blue Nursery to Icehouse Hill has been added to the 2025 Specific Plan project. Should there be a delay between the time the nursery would need to vacate its existing site and the time the new site on Icehouse Hill would be operational, this delay could lead to a temporary disruption in the nursery's ability to continue providing native plants for ecological restoration projects within the Habitat Conservation Plan area, which would hinder the mission of the Habitat Conservation Plan. This would be a new significant impact not disclosed in the Program EIR. Mitigation Measure BIO-5 ensures continuous operation of the facility and reduces the impact to less than significant.

9.3.5 CULTURAL RESOURCES AND TRIBAL CULTURAL RESOURCES[421]

Table 9-7: Program EIR and Subsequent EIR Cultural Resources and Tribal Cultural Resources Significance Conclusions

Program EIR Significance Conclusions	Subsequent EIR Significance Conclusions
Impact 4.D-1: Substantial Adverse Change in the Significance of a Historic Building or Structure **Significant but Mitigable** The Program EIR acknowledged that the historically significant Roundhouse would be restored, and the Lazzari Fuel building would be preserved. However, because of its existing condition, short term protection of the Roundhouse was found to be needed prior to its restoration and adaptive reuse. In addition, the substantial new development proposed adjacent these two structures would adversely affect the character of their historic setting. Mitigation Measure 4.D-1 was therefore proposed to require preparation and implementation of a restoration plan for the Roundhouse. Program EIR Mitigation Measure 4.D-1b was proposed to establish performance standards for development adjacent to these historic structures.	**Impact CUL-1: Substantial Adverse Change in the Significance of a Historic Building or Structure** **Subsequent EIR Finding. A New Significant Impact Would Result due to Substantial Changes to the Project:** • **Detailed Roundhouse restoration and adaptive reuse plan and potential for damage.** The Program EIR addressed protecting the Roundhouse in place and required preparation of a restoration plan. The 2025 Specific Plan provides a five-stage plan to deconstruct the existing Roundhouse prior to site grading along with reconstruction and adaptive use of the structure following site grading. Restoration and adaptive reuse of the historic Roundhouse would comply with the Secretary of the Interior's Standards for Rehabilitation. While the Roundhouse restoration plan recommends initial safety measures, including fencing the site, installing security measures to prevent unwanted access, mitigating imminent hazards, and removal of pests and plants, be initiated prior to Specific Plan approval, should these measures not be undertaken, continued deterioration of the historic Roundhouse structure would occur inconsistent with the General Plan and Program EIR mitigation measures. In addition, damage to the Roundhouse that might occur during this process could adversely affect the building's historic integrity. Finally, introduction of visually incompatible construction immediately adjacent to the building could result in a loss of integrity impacting the historic significance of the building. Analysis of the Roundhouse Preservation and Protection Plan indicate inadvertent damage to the roundhouse during its stabilization and restoration would constitute a significant impact that was not analyzed in the Program EIR. Mitigation Measure MM CUL-1b provides a protocol for addressing any damage that may occur to the Roundhouse during restoration activities that reduces the impact to less than significant. Baylands development would not have a direct or indirect impact on the Machinery & Equipment Building or the Bayshore/Crocker Tunnel as historical resources.

[421] The regulatory context for Baylands development in relation to Cultural Resources and Tribal Cultural Resources is presented in Section 4.7.3. Relevant Specific Plan provisions are presented in Section 4.7.4.

Program EIR Significance Conclusions	Subsequent EIR Significance Conclusions
Impact 4.D-2: Substantial Adverse Change in the Significance of an Archaeological Resource **Significant but Mitigable** The Program EIR concluded there was no surface evidence of a significant archaeological resource, but that site grading could uncover previously unidentified archaeological resources. Such a discovery would result in a substantial adverse change in the significance of an archaeological resource. Program EIR Mitigation Measure 4.D-2 establishes protocols to be followed should a previously unknown resource be encountered.	**Impact CUL-2: Substantial Adverse Change in the Significance of an Archaeological Resource** **Subsequent EIR Finding. A New Significant Impact Would Result as the Result of Information that was not known at the Time of the Program EIR:** • **Coring samples indicate high sensitivity for buried pre-contact cultural materials in native soils.** Coring samples conducted by the applicant after certification of the Program EIR to support Remedial Action Plans identified new areas with cultural materials indicating that portions of the Specific Plan Area have a high sensitivity for buried pre-contact cultural deposits in native soils. Updated analysis determined that the Baylands and adjacent areas also have a high sensitivity for surficial or shallow historic-era cultural deposits. Pre-contact sensitivity at the surface is also high along the northern and eastern edge of the Specific Plan area, which was on the edge of the marshland prior to the placement of artificial fill. Thus, excavations into native soils beneath the artificial fill within the Specific Plan have the potential to disturb buried resources. Should excavations for Baylands development extend into native soils, significant impacts to archaeological historical resources could result. Mitigation Measures MM UL-2a through CUL-2d require that, prior to Baylands construction, an Archaeological Testing Plan be established to clarify the depth of fill and the sensitivity of the construction site for archaeological resources, and to determine if site P-38-005131 has a subsurface component within that site. These measures also require cultural resources awareness training be provided for all construction personnel involved in ground-disturbing work and that archaeological monitoring be conducted in all areas identified as sensitive as a result of the archaeological testing.
Not addressed in the Program EIR.	**Impact CUL-3: Substantial Adverse Change in the Significance of a Tribal Cultural Resource** **Subsequent EIR Finding. No New Significant Impact Would Result** Because the Program EIR preceded adoption of Assembly Bill (AB) 52, no tribal consultation was offered at the time of the Program EIR, which did not address Tribal Cultural Resources. To comply with current legal requirements, six Tribal nations were offered the opportunity for consultation regarding the potential presence of Tribal Cultural Resources within the Baylands and appropriate mitigation for any resources that might be present. No Tribes responded and thus no potential Tribal Cultural Resources were identified.
Impact 4.D-4: Disturb Human Remains **Significant but Mitigable** While there is no surface evidence or historic record of use of the Project Site as a cemetery, site remediation and grading could uncover locations of previously unknown human remains, including those interred outside of formal cemeteries. Mitigation measure 4.D-4 required compliance with California Health and Safety Code Sections 7050.5(b), 7052, and 5097.	**Impact: CUL-4: Disturb Human Remains** **Subsequent EIR Finding. No New or Substantially More Severe Significant Impact Would Result** Although nearly all of the Baylands site consists of historical fill and has been previously disturbed and developed, Specific Plan development could involve excavation in native soils underlying the site. Specific Plan development would comply with California Health and Safety Code Sections 7050.5(b), Section 7052, and Section 5097, which would protect any previously unidentified human remains, including those interred outside of formal cemeteries.

9.3.6 TRANSPORTATION[422]

Table 9-8: Program EIR and Subsequent EIR Transportation Significance Conclusions

Program EIR Significance Conclusions	Subsequent EIR Significance Conclusions
Impact 4.N-1, 4.N-3: Increased Traffic at Intersections **Significant and Unavoidable** **Impact 4.N-2, 4.N-4: Increased Traffic on Freeway Mainline Segments** **Significant and Unavoidable** **Impact 4.N-5: Increased Traffic Due to Special Events** **Significant and Unavoidable** **Impact 4.N-13: Consistency with C/CAG Congestion Management Program** **Significant but Mitigable**	**Traffic Delay Metrics: Not Analyzed**[423] Subsequent to certification of the Program EIR, SB 743 and CEQA Guidelines Section 15064.3(b) eliminated traffic delay as a significant impact for land development projects. Analysis of increased traffic in relation to vehicle delay was not, therefore, undertaken and is not addressed in this EIR. No comparison can therefore be made to the analysis of traffic delay metrics in the Program EIR.

[422] The regulatory context for Baylands development in relation to Transportation is presented in Section 4.8.3. Relevant Specific Plan provisions are presented in Section 4.8.4. Additional proposed Transportation improvements are presented in Section 4.8.5.

[423] Senate Bill (SB) 743 and CEQA Guidelines Section 15064.3(b), which require analysis of transportation impacts based on vehicle miles traveled (VMT), went into effect after the Program EIR was certified. Traffic impact analyses and mitigation measures included in Program EIR Impacts 4.N-1 through 4.N-5, 4.N-13, and 4.N-17 are therefore no longer applicable under CEQA. CEQA Guidelines note that "Amendments to the Guidelines apply prospectively only … a project need only comply with the Guidelines in effect when the [CEQA] document is set out for public review …" (see CEQA Guidelines sections 15064.3(c) and 15007). A "project" refers to the underlying activity which may be subject to approval by one or more governmental agencies; it does not refer to each of the several approvals sequentially issued by different agencies (CEQA Guidelines section 15378(c)). OPR also explains "there may be circumstances when public agencies are considering changes to already approved projects that were analyzed using LOS. When determining whether subsequent and supplemental analyses are required under Public Resources Code section 21166, the agency should focus the inquiry on whether there are substantial changes in the project or circumstances that would require major revisions of the document, or if new information, which was not known and could not have been known at the time of becomes available. (Pub. Resources Code, § 21166; CEQA Guidelines, §§ 15162-15163.)" See also *Olen Properties Corp. v. City of Newport Beach* (2023) 93 Cal.App.5th 270, finding that "it is settled law in California that subsequent changes to the guidelines are not "new information" triggering section 21166, subdivision (c), so long as the underlying environmental issue was understood at the time of the initial EIR." At the time of the Program EIR, vehicle miles traveled was understood as part of equations to quantify mobile source air pollutant and GHG emissions, rather than as an environmental issue for transportation analysis.

Program EIR Significance Conclusions	Subsequent EIR Significance Conclusions
Vehicle Miles Traveled: Not Analyzed CEQA Guidelines at the time of the Program EIR focused on vehicle delay metrics. While the Program EIR included vehicle miles traveled as an input to analyses of air quality and GHG mobile source emissions, no analysis was undertaken specifically to address the significance of vehicle miles traveled.	**Impact: TRA-1 Vehicle Miles Traveled** **Subsequent EIR Finding. A New Significant Impact Would Result due to Changed Circumstances:** • **CEQA requirement for analysis of vehicle miles travelled indicated VMT impact due to diversions resulting from temporary roadway lane closures during construction.** Although Baylands construction activities would generate vehicle miles traveled, such travel would be temporary and not of a scale that would change regional VMT characteristics. While applicable encroachment permit requirements would provide safe travel, compliance with encroachment permit requirements and California Manual on Uniform Traffic Control Devices regulations during construction would provide safe travel. The 2025 Specific Plan would generate approximately 10 percent more daily trips (46,103) than were analyzed in the Program EIR (42,528 daily trips). While this would tend to increase VMT due to San Mateo County's jobs/housing imbalance, the 2025 Specific Plan concentrates a greater proportion of its housing and employment-generating uses within walking distance of the Bayshore Caltrain station and would implement a more robust transportation demand management program than was analyzed in the Program EIR. As a result, total VMT for the 2025 Specific Plan would be similar to that analyzed in the Program EIR.
Impact 4.N-6, 4.N-9: Increased Transit Demand on BART and Caltrain **Less than Significant** None of the scenarios analyzed in the Program EIR would exceed train transit capacity (BART and Caltrain) or require changes to Caltrain operations at the Bayshore Station. **Impact 4.N-7, 4.N-8: Increased Transit Demand on San Francisco Muni or SamTrans Systems** **Significant and Unavoidable** Baylands transit ridership in combination with cumulative effects would exceed Muni's capacity between San Francisco and San Mateo County and along the Geneva Avenue corridor for each scenario. While impact fees would be paid to Muni, Brisbane would not have the authority to direct the use of those fees. **Impact 4.N-10: Pedestrian Circulation** **Significant but Mitigable** Although Baylands development would not disrupt existing facilities outside the site, pedestrian accessibility would be limited at the periphery of the site due to a lack of existing pedestrian	**TRA-2: Facilitate Transit, Bicycle, and Pedestrian Travel Modes** **Subsequent EIR Finding. New and Substantially More Severe Significant Impacts Would Result due to Substantial Changes to the Project:** • **New Significant Impact. Proposed four-lane Geneva Avenue bridge cross-section would discourage bus rapid transit.** • **Substantially More Severe Significant Impact. Revised pedestrian and bicycle facilities plans result in gaps between Baylands and adjacent facilities.** Senate Bill (SB) 743 and CEQA Guidelines Section 15064.3(b), which eliminate increased transit usage as a physical environmental impact, went into effect after the Program EIR was certified. In addition, the 2025 Specific Plan substantially changes proposed Baylands roadway, bicycle, and pedestrian systems; modifies access to transit; and modifies the phasing of transportation improvements in relation to residential development. While the 2025 Specific Plan proposes a comprehensive internal bicycle and pedestrian system, it also includes several inadequate connections to offsite facilities which would require vehicular travel for trips that might otherwise be made by bicycle or walking. In addition, reduction of the Geneva Avenue bridge cross-section from 6 to 4 lanes would eliminate proposed dedicated bus rapid transit lanes on the bridge. This would require rapid transit buses to merge with vehicular traffic when crossing the bridge, discourage use of transit, slow emergency response across the bridge, and represent a new significant impact not disclosed in the Program EIR. Mitigation Measures MM TRA-2a through MM TRA-2d would reduce impacts to less than significant by eliminating inadequate bicycle and pedestrian connections and requiring a 6-lane bridge section that would accommodate bus rapid transit and minimize the potential for traffic safety conflicts at its western end. Continued availability of a bus stop and crosswalk adjacent to

Program EIR Significance Conclusions	Subsequent EIR Significance Conclusions
facilities. Proposed mitigation measures would provide adequate pedestrian connections to offsite facilities. **Impact 4.N-11: Bicycle Circulation** **Significant but Mitigable** Bicycle circulation would be improved within the site by each scenario analyzed in the Program EIR. Baylands development would not disrupt existing bicycle facilities adjacent to the site, interfere with planned bicycle facilities, or create inconsistencies with adopted bicycle system plans. However, because the 2011 Specific Plan did not include requirements to enhance the bicycling environment and maximize bicycle accessibility, the Program EIR determined a significant impact would result and proposed mitigation to reduce the impact to less than significant.	the relocated fire station would be maintained during and after construction, along with safe ingress and egress of fire apparatus as well as safe traffic, bus, and pedestrian movement.
Impact 4.N-12: Construction Traffic **Significant but Mitigable** Baylands development would result in temporary traffic increases during the site's 20-year construction period (with periods of no activity). Traffic impacts associated with construction would be temporary and intermittent related to the delivery of materials and equipment, removal of debris, and daily commute trips for construction workers. The Program EIR concluded that construction traffic coinciding with peak hour traffic could exacerbate adverse effects on traffic, transit services, and pedestrian and bicycle circulation and proposed Mitigation Measure 4.N-12 to reduce impacts to less than significant. **Impact 4.N-15: Hazards to Vehicles, Bicyclists, or Pedestrians** **Less than Significant** Baylands development would be required to meet applicable roadway design standards and would therefore not substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses.	**Impact TRA-3: Hazards to Vehicles, Bicyclists, or Pedestrians** **Subsequent EIR Finding. New Significant Impacts Would Result due to Substantial Changes to the Project:** • **Inadequate four-lane Geneva Avenue bridge cross-section with unsafe intersections at its western landing.** • **Closely spaced intersections along Bayshore Boulevard at Industrial Way and Main Street, as well as along Main Street at Industrial Way.** • **Roadway cross-sections for Roundhouse Circle, East Park Boulevard, and West Park Boulevard that would not meet City standards for fire access.** • **The new Baylands middle school and conversion of the existing Bayshore School to an elementary school would result in a substantial number of students walking or bicycling along and crossing Geneva Avenue and Bayshore Boulevard, both of which are identified by San Mateo County as High Injury Network roadways. Students would also travel along a 500-foot section of Main Street without sidewalks or bike lanes.** • **Potential for vehicle queueing at the Baylands middle school picking up and dropping off students to conflict with and create hazards for safe vehicular, bicycle, and pedestrian travel.** • **Increased queueing of vehicles waiting to exit the southbound US 101 freeway routinely backing onto the freeway mainline.** Baylands construction activities would conform to the requirements of the City's encroachment permit process and the California Manual on Uniform Traffic Control Devices regulations, which establish traffic operations and management rules for working safely and causing the least possible interference with people walking, bicycling, driving, or taking transit near construction areas.

Program EIR Significance Conclusions	Subsequent EIR Significance Conclusions
	Changes to the project include new intersection configurations, a modified cross-section on the Geneva Avenue bridge, and a roadway type (green shared streets) that would introduce geometric design features that would not meet applicable City design standards, which would result in new transportation safety hazards impacts not analyzed in the Program EIR. In addition, while the Program EIR analyzed the potential for close spacing of intersections to cause traffic queueing at one intersection along Geneva Avenue to back up into another intersection, the analysis addressed traffic delay rather than traffic safety. Mitigation Measures MM TRA-3a through MM TRA-3m would reduce these impacts to less than significant.
Impact 4.N-16: Emergency Access **Less than Significant** Project site development would provide internal circulation systems meeting City and NCFA requirements, and would therefore not result in inadequate emergency access, defined as physical or traffic congestion impediments that would prevent emergency vehicles from traveling to and from an emergency situation.	**TRA-4: Access for Emergency Response and Evacuation** **Subsequent EIR Finding. New Significant Impacts Would Result due to Substantial Changes to the Project:** • **Proposed four-lane Geneva Avenue bridge cross-section would constrain emergency response.** • **Roadway cross-sections for Roundhouse Circle, East Park Boulevard, and West Park Boulevard would not meet City standards for fire access.** • **Flooding along roadways needed for emergency vehicle access.** The 2025 Specific Plan makes substantial changes to the proposed Baylands roadway system, including relocating the existing Baylands fire station and adding a second fire station within the Baylands. Other changes would result in new significant impacts related to emergency access and response due to an inadequate cross-section on the Geneva Avenue bridge, flooding along Tunnel Avenue, and roadway sections that would not meet minimum City standards for emergency vehicle access that were not previously addressed in the Program EIR. The Specific Plan's proposed roadway network would provide multiple routes for emergency response, providing alternatives should any given roadway become inaccessible. In addition, the Bayshore Mobility Plan would maintain the ability for emergency vehicles to bypass traffic on Bayshore Boulevard by providing emergency traffic signal priority, median breaks, and queue jumps. The Geneva Avenue bridge section four-lane roadway section with no shoulders would adversely affect emergency access. In addition, the proposed cross sections for Roundhouse Circle, East Park Boulevard, and West Park Boulevard would not meet minimum City standards for emergency vehicle access. During a 100-year storm event, portions of key roadways such as Tunnel Avenue would not be available, which would hinder emergency access. Emergency access would also not be available to development sites along Frontage Road, including basement parking areas. Implementation of Mitigation Measure MM TRA-2c would require continuous bus rapid transit lanes along the Geneva Avenue extension, including the bridge over the Caltrain rail line, which would facilitate emergency response across the bridge and along the entirety of Geneva Avenue, even during peak travel hours.

Program EIR Significance Conclusions	Subsequent EIR Significance Conclusions
	Mitigation Measure MM TRA-3c would require Specific Plan roadways to meet City design standards and Supplemental Roadway Design Guidelines developed for the Baylands. In addition, Mitigation Measures MM HWQ-4a and MM HWQ-4b would ensure adequate emergency response access during a 100-year flood event.
Impact 4.N-14: Impacts to Air Traffic **No Impact** Project site development would not result in a change in air traffic patterns.	**Impacts to Air Traffic: Not Analyzed** **Subsequent EIR Finding. No New Significant Impact Would Result** Impacts to air traffic were adequately addressed in the Program EIR and no new analysis was necessary.
Impact 4.N-17: Loading Facilities **Significant but Mitigable** Project site development would substantially increase loading demand during the peak hour of activities. There were not sufficient details (e.g., number and location of parking spaces) at the time of the Program EIR to assess loading conditions, but as site-specific development projects would be proposed under the selected development scenario and required specific plan, loading (demand and supply) would be reviewed to ensure that demand would be met. Because there are no specific loading requirements in the Brisbane Municipal Code, a significant impact was identified. Program EIR Mitigation Measure 4.N-17 required site-specific development projects to provide sufficient loading areas in appropriate locations such that loading activities, including vehicle queuing, would not block roadway or onsite parking area travel lanes, or bicycle or pedestrian facilities.	**Impact TRA-5: Loading Facilities** **Subsequent EIR Finding. No New or Substantially More Severe Significant Impact Would Result** Impacts related to loading facilities were adequately addressed in the Program EIR its analysis, conclusions, and mitigation measure have been carried forward from the Program EIR.

9.3.7 AIR QUALITY[424]

Table 9-9: Program EIR and Subsequent EIR Air Quality Significance Conclusions

Program EIR Significance Conclusions	Subsequent EIR Significance Conclusions
Impact 4.B-2: Criteria Air Pollutants – Construction **Significant and Unavoidable** The Program EIR found that construction of each scenario would generate cumulatively considerable construction emissions of criteria pollutants and precursors for which the air basin is in nonattainment. Implementation of all feasible mitigation measures would not be capable to reducing this significant impact to less than significant. **Impact 4.B-4: Criteria Air Pollutants – Operations** **Significant and Unavoidable** The Program EIR found that operations of each scenario would cause a considerable net increase of criteria pollutants and precursors for which the air basin is in nonattainment under an applicable federal or state ambient air quality standard, primarily from mobile (vehicular) sources. Implementation of all feasible mitigation measures would not be capable of reducing this significant impact to less than significant.	**AQ-1: Criteria Air Pollutants** **Subsequent EIR Finding. No New or Substantially More Severe Significant Impacts Would Result** During site grading, average daily emissions of NO_X would exceed applicable thresholds. Once grading activities are completed, construction emissions would be minimal but would add to operational emissions of residential and commercial uses as buildings are completed and occupied. Grading and construction activities for the 2025 Specific Plan would increase daily average emissions of NO_X during the maximum grading construction year from the 89.9 pounds per day disclosed in the Program EIR to 104.7 pounds per day (16.5%). A comparison of unmitigated emissions indicates that the 2025 Specific Plan would increase daily emissions of ROG from 410.81 to 426.2 (3.7%), while reducing emissions of other criteria pollutants. Adherence to BAAQMD's best management dust minimization practices, which are mandated by the State Water Board Construction Stormwater General Permit, Order 2022-0057-DWQ, would reduce potential dust-related criteria air pollutant impacts during project construction. However, combined construction and operational emissions of ROG, NO_X, $PM_{2.5}$, and PM_{10} would exceed annual and daily thresholds starting with Phase 1 buildout and continue through full buildout operations. As documented in the vehicle miles traveled analysis undertaken for Impact TRA-1, Baylands residents and workers would generate substantially lower per capita vehicle miles traveled than the regional average. It is logical to conclude that reduced per capital VMT from Baylands residents and workers would result in reduced future cumulative regional mobile source air pollutant emissions within the nine-county Bay Area region compared to the same amount of development (2,200 dwelling units, 6.5 million square feet of commercial office, and 500,000 square feet of hotel use) being distributed elsewhere spread throughout San Francisco and San Mateo counties. With implementation of additional construction mitigation measures, construction NO_X emissions would be reduced, but not below the significance thresholds. Construction and operational mitigation measures would reduce ROG, NO_X, $PM_{2.5}$, and PM_{10} emissions due to cleaner engine technology; ROG emissions from architectural coatings by using lower VOC paints; criteria pollutants from operational vehicles through the installation of EV charging infrastructure; and other emissions through additional mitigation measures. Overall, implementation of more stringent TDM programs and mitigation measures than were proposed in the Program EIR would avoid generating a substantially more severe impact compared to the Program EIR.

[424] The regulatory context for Baylands development in relation to Air Quality is presented in Section 4.9.3. Relevant Specific Plan provisions are presented in Section 4.9.4.

Program EIR Significance Conclusions	Subsequent EIR Significance Conclusions
Impact 4.B-1: Localized Construction Dust Impacts **Significant but Mitigable** Development of each scenario analyzed in the Program EIR would result in substantial localized dust during the anticipated 20-year construction period. Mitigation measures were proposed that would reduce these impacts to less than significant. **Impact 4.B-3: Expose Sensitive Receptors to Substantial Pollutant Concentrations** **Less than Significant** Construction of each of the scenarios that were analyzed would not expose sensitive receptors to substantial concentrations of toxic air contaminants or respirable particulate matter ($PM_{2.5}$). **Impact 4.B-5: Expose Sensitive Receptors to Substantial Pollutant Concentrations** **Less than Significant** Operations associated with each scenario that was analyzed would not expose sensitive receptors to substantial concentrations of toxic air contaminants or respirable particulate matter ($PM_{2.5}$) as the result of Project Site development. **Impact 4.B-6: Expose Sensitive Receptors to Substantial Pollutant Concentrations** **Less than Significant** None of the scenarios analyzed in the Program EIR would expose people (new receptors) to substantial levels of toxic air contaminants (TACs), which may lead to adverse health as the result of Project Site development. **Impact 4.B-7: Expose Sensitive Receptors to Substantial Pollutant Concentrations** **Less than Significant** Sensitive receptors would not be exposed to substantial carbon monoxide concentrations as the result of any of the scenarios analyzed in the Program EIR.	**AQ-2: Expose Sensitive Receptors to Substantial Pollutant Concentrations** **Subsequent EIR Finding. New Significant Impacts Would Result from Substantial Changes to the Project:** • **Emissions of diesel particulate matter in relation to locations of sensitive receptors.** Whereas the Program EIR determined that construction of each of the scenarios that were analyzed would not expose sensitive receptors to substantial concentrations of toxic air contaminants or respirable particulate matter ($PM_{2.5}$), updated analyses undertaken for this EIR found that changes in the project's land use plan and phasing would cause emissions of diesel particulate matter (DPM) to result in an excess cancer risk level of up to 16.0 in one million during site grading (16.9 over a 30-year exposure period starting with initiation of construction activities). In addition, DPM from operational activities would result in an excess cancer risk level of up to 13.0 in one million for on-site Baylands residents and the new middle school in the northwest corner of the Icehouse Hill district during the 30-year exposure period following Specific Plan buildout. These values exceed applicable thresholds and represent significant impacts. Acute and chronic, non-cancer hazard index (HI), and annual average $PM_{2.5}$ concentrations would not exceed significance thresholds. Implementation of Mitigation Measures MM AQ-1c, MM AQ-1e, MM AQ-1g, and MM AQ-1k would reduce: • Excess cancer risk during grading and all construction to a maximum of 5.1 in 1 million, which is well below the significance threshold of 10 in 1 million. • The maximally exposed child receptor during operations to an excess cancer risk level of up to 5.9 in 1 million for a child residing adjacent to the Caltrain rail line north of Geneva Avenue and to 4.9 in 1 million for students at the Baylands middle school, both below the significance threshold of 10 in 1 million. • The maximally exposed individual residence to 4.5 in 1 million for offsite residents and 5.1 in 1 million for onsite residents, both below the significance threshold of 10 in 1 million. • The maximally exposed individual worker during operations would be 2.4 in 1 million for offsite workers and 1.8 in 1 million for onsite workers, both well below the significance threshold of 10 in 1 million. Impact AQ-2 would therefore be less than significant with mitigation incorporated.

Program EIR Significance Conclusions	Subsequent EIR Significance Conclusions
Impact 4.B-8: Odors **Significant but Mitigable** The Program EIR determined that objectionable odors would be generated by the proposed onsite recycled water plant, affecting a substantial number of people under all Project site development scenarios. Mitigation Measure 4.B-8 would reduce this impact to less than significant.	**Impact AQ-3: Odors** **Subsequent EIR Finding. A Substantially More Severe Significant Impact Would Result from Substantial Changes to the Project:** • **Increased odor generation from increasing water treatment facility capacity.** • **Sensitive receptors located approximately 500-600 feet closer than analyzed in the Program EIR.** The 2025 Specific Plan proposes doubling the size of the water recycling facility that was analyzed in the Program EIR. Daily operations of the water recycling facility could result in objectionable odors to nearby sensitive receptors. The water recycling facility, which is proposed on the east side of the Caltrain right-of-way, would be located approximately 500 feet from the closest residential receptor in the Roundhouse District. The closest, off-site residents would be located approximately 2,000 feet west of the facility, approximately 500-600 feet closer than was analyzed in the Program EIR. Because construction-related odors from diesel equipment and vehicles would be localized and temporary, and low-VOC surface coating materials in accordance with BAAQMD Rules would reduce potentially objectionable odors from painting operations, construction activities, including the use of diesel and surface coating materials would be less than significant. The large majority of uses that would be permitted by the Specific Plan would not generate objectionable odors. While food preparation at restaurants and hotels, as well as coffee roasting within the Baylands, both of which are permitted by the Specific Plan, could result in odor generation, such odors would be generated on a small scale and not have a substantial adverse effect on a substantial number of people, as would be demonstrated by the required monitoring of BAAQMD regulation 7 for any odor complaints. Implementation of mitigation measures would establish performance standards for water recycling facility operations, require installation of an odor control system, and mandate adherence to best management practices.

Program EIR Significance Conclusions	Subsequent EIR Significance Conclusions
Impact 4.B-9: Would the Project conflict with or obstruct implementation of the applicable air quality plan? **Significant and Unavoidable** Because each Project Site development scenario was found to exceed applicable thresholds for emissions of criteria pollutants during both construction and operations, the Program EIR concluded that Project Site development would not support the primary goals of the Clean Air Plan and would therefore conflict with its implementation.	**Impact AQ-4: Consistency with the Bay Area Clean Air Plan** **Subsequent EIR Finding. Substantial Changes to the Project and Circumstances Indicate a Previously Identified Significant and Unavoidable Impact would now be Less than Significant** • **Changes to the Project: More stringent energy conservation and TDM programs, increased onsite renewable energy generation, onsite use of 100 percent renewable energy, and reduced housing** • **Changes to Circumstances: Adoption of an Updated Clean Air Plan by the BAAQMD** The Specific Plan would support the primary goals of the 2017 Clean Air Plan because it is a mixed-use, transit-oriented development generating and using sustainable energy for residential, commercial, and other uses. In addition, the Specific Plan includes many of the control measures from the 2017 Clean Air Plan, as shown in Table 4.9-22. Thus, the Specific Plan would not interfere with, disrupt, or hinder implementation of the Plan. Additionally, Mitigation Measure MM LUP-2 would ensure consistency with MTC's Transit-Oriented Communities Policy and ensure the Specific Plan provides appropriate housing and employment-generating development in proximity to transit, reducing vehicle miles traveled and associated mobile source emissions.

9.3.8 GREENHOUSE GAS EMISSIONS[425]

Table 9-10: Program EIR and Subsequent EIR Greenhouse Gas Emissions Significance Conclusions

Program EIR Significance Conclusions	Subsequent EIR Significance Conclusions
Impact 4.F-1: Greenhouse Gas Emissions **Less than Significant** Based on a quantitative efficiency threshold of 4.6 metric tons of CO_2e per service population annually that had been proposed by BAAQMD in its 2009 document *Revised Draft Options and Justification Report for California Environmental Quality Act Thresholds of Significance*, the Program EIR determined the GHG impact of Baylands development to be less than significant. Project Site development would generate greenhouse gas emissions primarily as the result of motor vehicle use, but also	**Impact GHG-1: Specific Plan Area Greenhouse Gas Emissions** **Subsequent EIR Finding. A New Significant Impact Would Result from Changed Circumstances:** • **Adoption of an Updated Clean Air Plan by BAAQMD** • **Use of net zero emissions threshold in place of the outdated efficiency metric used in the Program EIR** Program EIR Impact 4.F-1 determined that the then-proposed mix of 4,434 dwelling units; 6,684,000 square feet of commercial, office, retail, and research and development (R&D) uses; and 369 hotel rooms (261,100 square feet) would generate 86,203 $MTCO_2e$ annually at buildout. The Program EIR also determined that eliminating onsite residential development, retaining 6,752,800 square feet of non-residential, and increasing the number of hotel rooms to 1,990 (1,392,300 square feet) would increase GHG emissions from 108,222 $MTCO_2e$ annually at buildout.

[425] The regulatory context for Baylands development in relation to Greenhouse Gas Emissions is presented in Section 4.10.3. Relevant Specific Plan provisions are presented in Section 4.10.4.

Program EIR Significance Conclusions	Subsequent EIR Significance Conclusions
through stationary sources (e.g., building energy use). The proposed onsite mix of residential and commercial/ office development in the Specific Plan, provides for internal capture of trips within the Baylands, substantially reducing per capita GHG emissions compared to commercial office only development scenarios.	GHG emissions from the 2025 Specific Plan at buildout (including amortized construction emissions) would be 51,260 metric tons of carbon dioxide equivalent ($MTCO_2e$). When taking into account the Baylands effect on future cumulative regional VMT documented by the analysis of Impact TRA-1, Baylands development at buildout would likely reduce future cumulative regional GHG emissions associated with mobile sources within the nine-county Bay Area region as the result of reducing regional VMT. Implementation of Air Quality Mitigation Measures MM AQ-1e, and MM AQ-1k, along with Greenhouse Gas Mitigation Measure MM GHG-1d would result in a quantifiable reduction of GHG emissions by approximately 4,138 MT CO_2e per year. Other mitigation measures (Air Quality Mitigation Measures MM AQ-1a, MM AQ-1b, MM AQ-1c, MM AQ-1i, and MM AQ-1j, along with Greenhouse Gas Mitigation Measures MM GHG-1a, MM GHG-1b, and MM GHG-1c, and MM GHG-1e) for which an estimated reduction is not readily quantifiable along with the regional VMT reduction identified in Section 4.8, *Transportation*, would only achieve marginally more reductions. Implementation of the GHG emissions offset program set forth in Mitigation Measure MM GHG-1e would be difficult given the large number of GHG offset credits required, their locational parameters, the timing of their purchase and retirement, and their future availability and its success could not be guaranteed.
Not addressed in the Program EIR.	**Impact GHG-2: Effect on Regional Greenhouse Gas Emissions** **Subsequent EIR Finding. No New Significant Impact Would Result** As documented in the vehicle miles traveled analysis undertaken for Impact TRA-1, Baylands residents and workers would generate substantially lower per capita vehicle miles traveled than the regional average. While Baylands development would increase GHG emissions from uses within the Specific Plan area, it is logical to conclude that reduced per capital VMT from Baylands residents and workers would result in reduced regional mobile source GHG emissions compared to developing the Specific Plan's proposed 2,200 dwelling units, 6.5 million square feet of commercial office, and 500,000 square feet of hotel use outside of the Baylands spread throughout San Mateo and San Francisco counties.
Impact 4.F-2: Consistency with Applicant GHG Reduction Plans and Programs **Less than Significant** The Program EIR determined that greenhouse gas emissions for each of the scenarios that were analyzed would be less than significant. As a result, Baylands development would not impair attainment of GHG reduction goals established pursuant to AB 32 in the *Climate Change Scoping Plan*.	**Impact GHG-3: Consistency with Applicant GHG Reduction Plans and Programs** **Subsequent EIR Finding. No New Significant Impact Would Result** The Specific Plan would not obstruct implementation of relevant Scoping Plan actions to reduce GHG emissions related to VMT reduction and building decarbonization. The 2025 Baylands Specific Plan provides land use, building design, and transportation features consistent with meeting most of the performance standards contained in the BAAQMD's CEQA Guidelines. Specific Plan development would reduce regional vehicle miles traveled and result in substantial reductions in home to work trips for Baylands residents and workers consistent with achieving state-wide GHG reduction goals. The Specific Plan commits to substantial on-site renewable energy generation, and, all-electric buildings. It would not extend natural gas service to new uses and would provide distributed battery storage facilities and operate with 100 percent renewable energy. The Specific Plan is designated as a Priority Development Area in Plan Bay Area 2050 and is consistent with the GHG reduction measures of the regional Sustainable Communities Strategy. In addition, with implementation of Mitigation Measure LUP-2, the Specific Plan would be consistent with MTC's Transit-Oriented Communities Policy (Resolution No. 4530).

9.3.9 ENERGY RESOURCES[426]

Table 9-11: Program EIR and Subsequent EIR Energy Resources Significance Conclusions

Program EIR Significance Conclusions	Subsequent EIR Significance Conclusions
4.P-1: Energy Consumption during Construction **Significant but Mitigable** Energy use during Project Site construction of each alternative analyzed in the Program EIR would result in substantial consumption of energy, which is considered to be a significant impact. To reduce this impact to a less-than-significant level, implementation of Mitigation Measure 4.P-1 would be required as would implementation of Mitigation Measures 4.B-2a and 4.B-2b, as recommended in Section 4.B, *Air Quality*, and Mitigation Measure 4.N-12, as recommended in Section 4.N, *Traffic and Circulation*. In addition, construction energy use would (following completion of site remediation) be similar on a unit basis to other developments throughout the region. Although the extent of Project Site development is large, construction and development would occur over a 20-year period, and demand for construction-related electricity and fuels would be spread out over that time. **4.P-2: Energy Consumption during Operations** **Significant but Mitigable** Each scenario analyzed in the Program EIR would substantially increase consumption of electricity and natural gas within the Project Site. While Project Site development-related electrical consumption would be largely offset by renewable energy generation, the total increase in energy consumption would nevertheless remain substantial. Baylands development would comply with Brisbane Municipal Code Section 15.80, which specifies green building standards for new developments, including meeting a minimum Leadership in Energy and Environmental Design (LEED) "Silver" rating on the Green Building Project Checklist for all new commercial projects	**EN-1: Energy Resources** **Subsequent EIR Finding. No New or Substantially More Severe Significant Impact Would Result** *Construction.* Compliance with existing state regulations to minimize fuel use would ensure that Project construction activities requiring the use of fossil fuels would not be wasteful, inefficient, or unnecessary. Moreover, Baylands construction would not be expected to result in demand for energy greater on a per-unit-of-development basis than other development projects in the region, except for the necessary grading that is required to return the Baylands to a safe and healthy condition and provide adequate protection from flooding and projected sea level rise. While mitigation for construction impacts is not required, Mitigation Measures MM AQ-1a, MM AQ-1c, and MM AQ-1i would further reduce energy consumption during Baylands construction. *Operations.* The Specific Plan proposes a suite of sustainability features including LEED Gold buildings, all-electric buildings, electric vehicle charging, on-site solar powered infrastructure systems, distributed and utility-scale Battery Storage systems, on-site bicycle and pedestrian trails connecting to off-site trails, and TDM Plans to reduce mobile fuel use. In addition, transportation demand management programs would be implemented to reduce per capita vehicle miles traveled by Baylands residents and employees by more than 30 percent below the existing regional baseline VMT. The Specific Plan provides for buildings to be designed to be LEED Gold or GreenPoint Rated (based on 2022 rating criteria for LEED and GreenPoint) Residential and nonresidential buildings within the Specific Plan area would comply with CALGreen Tier 1 voluntary standards. Ultimately, Baylands development would have lower per capita energy consumption compared to the Bay Area region due to the following: • The combination of the Specific Plan's mixed-use character, location adjacent to transit, provision of a comprehensive on-site trails system with connections to areawide and regional trails, and TDM programs would reduce per capita VMT for Baylands residents and employees below the regional average and reduce regional VMT. • With respect to EV charging, Baylands residential and commercial buildings would be constructed to meet the 2022 CALGreen Tier 1 Voluntary Building Energy Standards and the City's recently adopted Reach Code. Mitigation Measure AQ-1j would require the Specific Plan to meet Tier 2 Voluntary Building Energy Standards.

[426] The regulatory context for Baylands development in relation to Energy Resources is presented in Section 4.11.3. Relevant Specific Plan provisions are presented in Section 4.11.4.

Program EIR Significance Conclusions	Subsequent EIR Significance Conclusions

over 10,000 square feet and achieving a "green home" rating on the MultiFamily GreenPoint Checklist for any residential developments with 20 or more units.
A number of Project Site development features and EIR mitigation measures would reduce the significant increase in energy consumption to a less-than-significant level, including development of onsite alternative energy-generating technologies and implementation of energy-saving design and building techniques.
On a per-square-foot-of-building basis, development of the Project Site would result in 56.6 to 80.8 percent less electrical consumption than would comparable development projects that comply with the requirements of Title 24 but do not provide for onsite electrical energy generation.
Inefficient, wasteful, and unnecessary consumption of energy would be avoided or reduced with implementation of Mitigation Measure 4.F-1 (see Section 4.F, *Greenhouse Gas Emissions*), which sets energy efficiency performance standards. In addition, Mitigation Measures 4.P-2a through 4.P-2c would further reduce energy use by ongoing operations of Project Site uses.
 	
4.P-3: Mobile Source Energy Consumption
Significant but Mitigable
Project Site development would result in a substantial increase in vehicular fuel use. Inefficient, wasteful, and unnecessary consumption of fuel would be avoided or reduced with implementation of mitigation measures to help minimize fuel use associated with Project Site development-related trips, including Mitigation Measures 4.B-4, which imposes operational emission controls; 4.N-1f and 4.N-13, which require preparation of a Transportation Demand Management program; 4.N-7, which requires provision of bus service to and from proposed land uses; and 4.N-11, which requires provision of bicycle parking onsite.
	• On-site renewable generation and distributed battery storage would be far greater than is typical for development throughout the Bay Area region.
	• Baylands development would not increase reliance on fossil fuels or decrease reliance on renewable energy sources because:
	  ○ The relatively lower per capita VMT identified above would result in less per-capita fossil fuel consumption than is typical for the Bay Area.
	  ○ The project would include substantial on-site solar energy generation and on-site battery storage, thereby reducing the need for fossil-fuel-generated energy and actually increasing reliance on renewable energy.
	Thus, Baylands development would not result in a new or substantially more severe impact.

Not addressed in the Program EIR.	**EN-2: Consistency with Energy Resources Plans** **Subsequent EIR Finding. No New Significant Impact Would Result** The Baylands Specific Plan provides for transit-oriented mixed-use development within an area designated by *Plan Bay Area 2050* as a Priority Development Area, and a Transit Priority Area, and would provide substantial on-site energy generation. The Baylands would not conflict with the *Plan Bay Area 2050* policies related to renewable energy or energy efficiency as concluded in Section 4.3, *Land Use and Planning Policy*.

9.3.10 NOISE AND VIBRATION[427]

Table 9-12: Program EIR and Subsequent EIR Noise and Vibration Significance Conclusions

Program EIR Significance Conclusions	Subsequent EIR Significance Conclusions
Impact 4.J-4: Temporary Increase in Noise Levels **Significant and Unavoidable** The noisiest phase of construction would be during pile driving, which would generate noise levels of approximately 90 to 105 L_{eq} at 50 feet. Excavation and exterior finishing would also generate a substantial amount of noise. Mitigation Measures 4.J-4a and 4.J-4b would reduce Project construction noise; however, the substantial noise levels associated with potential pile driving and the proximity to residential receptors would be a significant and unavoidable impact.	**Impact NOI-1: Temporary Increase in Ambient Noise Levels during Construction** **Subsequent EIR Finding. Substantially More Severe Significant Impacts Would Result from Substantial Changes to the Project and Information not Available at the Time of the Program EIR:** • **Revised Specific Plan phasing program** • **Updated geotechnical reports prepared for site remediation and landfill closure submitted to state and county regulatory authorities** Updated geotechnical reports indicate that installation of pile foundations and resulting pile driving within the Baylands would be more extensive than was analyzed in the Program EIR, which also did not explicitly analyze noise effects resulting from multiple pile driving activities that could occur at any given time or the effects of pile driving for the Geneva Avenue bridge and buildings west of Caltrain on adjacent residential uses within the Baylands. In addition, the 2025 Specific Plan's phasing program could create increased potential for sensitive uses to be located immediately adjacent to buildings requiring pile driving compared to what was previously considered in the Program EIR. Pile driving activities within the western portion of the Baylands would increase daytime noise levels by 15 to 43 dBA in 3 locations while pile driving within the eastern portion of the Baylands would increase daytime noise levels by 10 to 17.4 dBA in two locations. Updated noise analyses have determined that some construction activities, such as concrete pours or other work to maintain safety or avoid traffic impacts, may require nighttime activity that could conflict with the City of Brisbane's ordinance limiting the hours and days allowed for construction work. Such nighttime activities would result in temporary noise level increases exceeding the quieter nighttime ambient noise levels by more than 10 dBA at any Baylands housing that might be occupied while construction activities are being undertaken for other Baylands development increments. While implementation of Program EIR Mitigation Measures 4.J-4a and 4.J-4b (now numbered MM NOI-1a and MM NOI-1b) would reduce construction noise, localized noise increases of more than 10 dBA at new residences within the Specific Plan area from both vertical building construction and installation of pile foundations would occur. Site-specific geotechnical conditions may require impact pile driving as close as 50 feet to occupied residential uses within the Baylands, which could generate noise as great as 21 dBA above ambient in proximate offsite locations. While the addition of Mitigation Measures MM NOI-1c through MM NOI-1e would further reduce construction noise, building construction adjacent to occupied dwelling units within the Baylands and roadway noise increases along four roadway segments would remain significant and unavoidable because of the proximity of receptors and unavailability of feasible mitigation strategies. Additionally, construction

[427] The regulatory context for Baylands development in relation to Noise and Vibration is presented in Section 4.12.3.

Program EIR Significance Conclusions	Subsequent EIR Significance Conclusions
	noise impacts from installation of pile foundations would still remain significant since site-specific geotechnical conditions may require impact pile driving as close as 50 feet to occupied residential uses.
Impact 4.J-3: Permanent Increase in Noise Levels **Significant but Mitigable** Operation of heating, ventilation, and air conditioning equipment would be subject to City Noise Ordinance standards. Provided that the equipment would be designed and used in a manner that complies with those standards (see Mitigation Measure 4.J-3a), the noise impact on Project residences and adjacent land uses would be less than significant. Operational noise related to the arrival, departure, and loading/unloading of goods from delivery trucks associated with Project site development's proposed warehouse and commercial land uses would generate noise. Retail land uses in all scenarios would be located as close as 350 feet from the nearest existing sensitive receptor (residences) on MacDonald Avenue. With implementation of the Mitigation Measures 4.J-3a and 4.J-3b, the noise impact from stationary operations would be reduced to a less-than-significant level.	**Impact NOI-2: Permanent Increase in Ambient Noise Levels from Stationary Sources** **Subsequent EIR Finding. New and Substantially More Severe Significant Impacts Would Result from Substantial Changes to the Project:** • **Revised land use plan placing stationary noise sources and receptors in different locations relative to each other.** • **Increased size of water recycling facility and addition of battery storage facilities.** Substantial changes to the project would place stationary noise generators and noise sensitive receptors in different locations relative to each other than was analyzed in the Program EIR. Analysis of noise from HVAC units undertaken for the Specific Plan EIR indicated a new significant impact not addressed in the Program EIR would occur. While the 2025 Specific Plan provides requirements for screening of HVAC units, these screening requirements would not ensure compliance with applicable thresholds for sensitive receptors and applicable noise ordinance requirements could thus be exceeded. The Specific Plan EIR also recognizes practical difficulties in establishing baseline ambient noise levels within the Baylands that would be used to determine compliance with Brisbane noise ordinance standards and therefore concluded that mitigation of operational noise impacts could not be guaranteed. In addition, the Program EIR did not analyze the noise impacts of onsite infrastructure. While the Baylands water recycling facility would provide noise control features, the facility's current design is conceptual. In the absence of design specifications, a quantitative demonstration that the facility would meet applicable Brisbane noise standards is not possible and it must be assumed that noise levels from operations would exceed applicable thresholds. In addition, battery storage systems which could be located as close as 150 feet to Baylands high-density residential uses within the Roundhouse District, would generate noise that could increase ambient noise levels in excess of 5 dBA. Noise increases from commercial heavy/medium-duty truck deliveries would be more than 5 dBA where the existing noise level is 59 dB L_{eq} or less at 50 feet away, which could occur during early morning deliveries in nighttime hours (before 7:00 a.m.). The Specific Plan does not contain requirements that would ensure loading docks are sited such that the building acts as a barrier from noise for adjacent noise-sensitive land uses or by provision of noise barriers or limits on delivery times and access routes, potentially allowing noise from loading activities to exceed applicable noise standards. Program EIR Mitigation Measure 4.J-3a (now numbered MM NOI-2a) would reduce noise impacts associated with stationary building equipment and truck delivery areas and loading docks. Mitigation Measure NOI-2a would ensure that these sources would be less reduced to less than significant. However, significant impacts from battery storage systems, water recycling facility, amplified sound, and an overall aggregate noise increase from stationary sources not envisioned in the Program EIR would remain significant.

Program EIR Significance Conclusions	Subsequent EIR Significance Conclusions
	The addition of Mitigation Measures NOI-2c through NOI-2f would be sufficient to achieve operation of individual stationary sources to be consistent with the noise standards of Brisbane Municipal Code Sections 8.28.030, 8.28.040, and 8.28.050. However, ensuring that resultant noise levels could be maintained less than 5 dBA above ambient levels is not reasonably feasible given that (1) each receptor would need a baseline measurement in a noise environment with multiple sources; (2) the noise environment would be constantly changing due to other noise sources as the Specific Plan develops; and, (3) construction activities discussed under Impact NOI-1 would hinder the establishment of baseline noise levels within the Specific Plan area for many years. Therefore, the residual impact of each of these stationary noise source types would be significant and unavoidable. Additionally, the aggregate operation of all these sources would increase noise levels generated within the Specific Plan area as a whole to an extent not analyzed in the Program EIR. Because the exact future location and configuration for all of these sources cannot be known at this time, it is not possible to ensure that the aggregate increase in noise levels at specific off-site receptor locations from stationary sources would not result in a permanent noise increase in excess of 5 dBA L_{eq}.
Impact 4.J-3: Permanent Increase in Ambient Noise Levels **Less than Significant** The Baylands development scenarios analyzed in the Program EIR would generate approximately 42,446 to 82,176 net new vehicle trips per day (44,985 for the 2011 Specific Plan), which would be distributed over the local street network and increase roadside noise levels. At a distance of 75 feet from the centerline of roadway segments to account for the presence of multiple lanes, roadway shoulder, sidewalk and building setbacks, all of which contribute to the attenuated sound level at residences or other receptors, the only roadway segment where increases noise would exceed significance criteria (in this case, an increase of 1.5 or greater in an area in excess of 65 DNL), which would only occur during a special event at the arena or concert venue proposed in one of the scenarios analyzed in the Program EIR.	**Impact NOI-3: Permanent Increase in Ambient Noise Levels along Roadways** **Subsequent EIR Finding. A New Significant Impact Would Result from Substantial Changes to the Project:** • **Revised land use program and roadway configuration.** The 2025 Specific Plan project would generate 46,103 daily trips on the surrounding roadway system at buildout, slightly more than the 44,985 daily trips than the 2011 Specific Plan but more than 40 percent less than non-residential scenarios that were analyzed in the Program EIR. the Program EIR determined that a significant traffic noise impact would result only for special event traffic at an arena or concert venue that are not proposed in the 2025 Specific Plan. The Specific Plan EIR, however, identified one roadway segment where Baylands-generated traffic would exceed applicable noise thresholds with Phase 1 traffic and three roadway segments that would at exceed applicable thresholds buildout. Thus, the 2025 Specific Plan project would result in a significant impact that was not identified in the Program EIR. Mitigation Measure MM NOI-3 evaluated available measures to reduce Baylands-generated noise impacts and determined that measures other than TDM programs, which were already included in the traffic projections upon which noise impact analysis was undertaken, would be feasible only in some locations, or would be unenforceable since the impact would occur outside of Brisbane. As such, it cannot be assured that feasible measures could be implemented to the degree sufficient to reduce impacts to less than significant.
Impact 4.J-1: Expose People to Noise Levels in Excess of Applicable Standards **Significant but Mitigable** *Expose Residents and Hotel Guests to Excessive Noise Levels from Railroad Operations*	**Impact NOI-4: Expose People to Railroad, Freeway, and Airport Noise** **Subsequent EIR Finding. No New or Substantially More Severe Significant Impact Would Result** *Expose Residents and Hotel Guests to Excessive Noise Levels from Railroad Operations* Implementation of Program EIR Mitigation Measures 4.J-1a and 4.J-1b (now numbered MM NOI-4a and NOI-4b) would require residential, hotel, and other uses where people normally sleep to be designed to maintain an interior Day Night Noise Level (DNL) no greater than 45 dBA. Outdoor common areas would

Program EIR Significance Conclusions	Subsequent EIR Significance Conclusions
Residents of multi-family housing and hotel guests would be exposed to noise levels that exceed the standards established by the Brisbane General Plan. Exposure of schools within the Project Site to noise would be less than significant under Project Site development. Mitigation Measures 4.J-1a and 4.J-1b would reduce impacts to less than significant. *Expose People to Excessive Noise Levels from Airport Operations* The Noise Exposure Map for SFO indicates that all portions of the City of Brisbane are outside the 65-CNEL noise contour relative to aircraft noise from the airport (i.e., aircraft operations from the airport contribute less than 65 dBA to ambient noise levels within Brisbane) (SFO, 2012) which is the state and federal threshold for noise abatement pursuant to Caltrans and FAA guidelines. As noted in Section 4.I, *Land Use and Planning*, the Project Site is, however, within Airport Influence Area A, which is defined as an area that is flown by an aircraft at an altitude of 10,000 feet or less above mean sea level a minimum of once weekly.	be required to maintain a 65 dBA DNL, which would adequately protect Baylands residents from noise generated by Caltrain rail operations. As a result, Baylands development would not exacerbate the noise impacts of railroad-generated noise by placing noise-sensitive uses close to the Caltrain right-of-way. *Expose People to Excessive Noise Levels from Airport Operations* The Baylands is located outside the 65 dB CNEL noise contour of SFO airport operations. As noted in the Program EIR, the Baylands is within Airport Influence Area A, which is defined as an area that is flown by an aircraft at an altitude of 10,000 feet or less above mean sea level a minimum of once weekly.
Impact 4.J-2: Vibration Effects on Buildings **Significant but Mitigable** Development in the vicinity of the Roundhouse would involve standard construction equipment and would be unlikely to require high-impact equipment such as pile driving. However, if pile driving were necessary for proposed buildings near the Roundhouse, construction-related vibration would be significant if it were to occur within 85 feet of the structure. The upper end of vibration levels generated by standard construction equipment would be 0.089 in/sec which would be generated by large bulldozers, hoe rams or caisson drilling at a distance of 25 feet and would be below the criterion published by Caltrans of 0.25 in/sec for the protection of fragile buildings. Implementation of Mitigation Measure 4.J-2b would ensure that impacts to historic structures resulting from pile driving vibrations would be less than significant.	**Impact NOI-5: Temporary or Permanent Increase in Vibration** **Subsequent EIR Finding. New and Substantially More Severe Significant Impacts Would Result from Substantial Changes to the Project:** • **Substantially More Severe Significant Impact: Changes to phasing program that would result in pile driving in proximity to newly constructed buildings within the Baylands** • **New Significant Impact: Pile driving in proximity to Kinder Morgan underground pipelines.** Although existing off-site structures would not experience Baylands-generated vibration exceeding applicable thresholds, pile driving within the Baylands buildings would expose previously constructed buildings as close as 25-40 feet away within the Icehouse Hil, Roundhouse, and Bayshore districts to vibration levels of 0.321 to in/sec PPV, above the applied human annoyance criterion of 72 VdB (0.016 in/sec PPV) but below the building damage threshold for modern structures of 0.5 in/sec PPV. Within the Campus East District, pile driving would expose previously constructed Baylands buildings as close as 25 feet south of the construction of low-density commercial buildings to a vibration level of more than 0.65 in/sec PPV, which is above both the applied human annoyance threshold of 72 VdB (0.016 in/sec PPV) and the building damage threshold of 0.50 in/sec PPV. Pile driving activities within 8 feet of Kinder Morgan pipelines would generate sufficient vibration to damage the pipeline. Pile driving within 5 feet of underground pipelines or other underground structures could exceed the 10.0 in/sec PPV criterion, which would constitute a new significant impact not disclosed in the Program EIR. Implementation of Program EIR Mitigation Measures 4.J-2b and 4.J-2c (now numbered MM NOI-5a and MM NOI-5b) would reduce impacts related to building damage to the Roundhouse or the Machinery & Equipment building and historic structures to less than significant by requiring preconstruction surveys,

Program EIR Significance Conclusions	Subsequent EIR Significance Conclusions
	monitoring, and provisions for repairing damage. Impacts to the Roundhouse structure would be further minimized because it would be removed and reassembled. However, significant impacts with respect to human annoyance would remain. The addition of Mitigation Measure NOI-5c addresses residual impacts associated with potential damage to non-historic structures and human annoyance impacts. This measure would require the preparation and implementation of a Master Construction Vibration Avoidance and Reduction Plan that would ensure vibration levels from impact or vibratory pile driving within the Baylands would not exceed applicable thresholds.
Impact 4.J-2: Exposure of People to Groundborne Vibration or Noise Levels **Significant but Mitigable** Project Site development would expose onsite residents to vibration from rail operations, representing a significant impact. Mitigation Measure 4.J-2a establishes a vibration performance standard for residential developments within 200 feet of the Caltrain Station and mainline track and requires that detailed project-level vibration analyses be prepared to ensure that the standard will be met. In addition, Mitigation Measure 4.J-2b would ensure that pile driving vibrations impacts to any historic structures (Roundhouse) are minimized. Implementation of Mitigation Measure 4.J-2a would ensure that impacts related to groundborne vibration from rail operations would be less than significant. Implementation of Mitigation Measure 4.J-2b would ensure that impacts to historic structures resulting from pile driving vibrations would be less than significant.	**Impact NOI-6: Exposure of People to High Vibration Levels** **Subsequent EIR Finding. No New or Substantially More Severe Significant Impact Would Result** Development of housing and hotel uses proposed for the tower buildings within the eastern portion of the Bayshore and Roundhouse Districts within 50 feet of the Caltrain rail line would exacerbate the vibration impacts of Caltrain and other rail operations by exposing on-site residents and hotel guests to more than 70 rail operations generating 72 VdB or more. This would constitute a significant impact. Implementation of Mitigation Measure MM NOI-6 would ensure that groundborne vibration from rail operations would be less than the applicable threshold and thereby avoid exacerbating vibration impacts from rail operations on Baylands residential and hotel uses.

9.3.11 HAZARDS AND HAZARDOUS MATERIALS[428]

Table 9-13: Program EIR and Subsequent EIR Hazards and Hazardous Materials Significance Conclusions

Program EIR Significance Conclusions	Subsequent EIR Significance Conclusions
Impact 4.G-1: Routine Transport, Use, and Disposal of Hazardous Materials **Significant but Mitigable** *Construction* Compliance with applicable requirements and a Stormwater Pollution Prevention Plan pursuant to Program EIR mitigation measures would ensure that hazards to the public or the environment through the routine transport and use or disposal of hazardous materials during project construction activities would be reduced to a less-than-significant level. *Operations* Baylands development would primarily consist of residential, commercial/office, public, and open space uses that would not transport, use, store, or dispose of large quantities of hazardous materials that could present a substantial risk to people. Uses such as hardware stores, laboratories, and the relocated fire station that would store hazardous materials in amounts greater than minimum reportable quantities would be required to prepare Hazardous Materials Business Plans tailored to their specific operations *to* reduce the potential for hazardous materials release during the routine transport, use, or disposal of such materials. **Impact 4.G-2: Risk of Upset** **Significant but Mitigable** While the routine use, storage, transport, and disposal of hazardous materials in accordance with applicable regulations would not pose health risks, improper use, storage, transportation and disposal of hazardous materials and wastes could result in accidental spills or releases. Encountering contaminated soils or groundwater either during or following remediation could result in significant adverse effects. If temporary dewatering occurs in areas of shallow groundwater and groundwater contamination is	**Impact HAZ-1: Transport, Use, Disposal, and Management of Hazardous Materials** **Subsequent EIR Finding. A Substantially More Severe Significant Impact Would Result from Substantial Changes to the Project:** • **Plans for Icehouse Hill trails and recreational improvements, as well as relocation of Mission Blue Nursery to the police shooting range site, requiring clean up.** Because Remedial Action Plans for OU-SM and OU-2 have been approved as has the Title 27 landfill closure plan, the physical environmental effects of site remediation and landfill closure activities are no longer part of the project. Program EIR Mitigation Measures 4.G-2a through 4.G-2d (now numbered MM HAZ-1a through MM HAZ-1d), and MM HAZ-1d would ensure implementation of General Plan policy and address impacts not addressed through compliance with applicable federal, state, and regional hazardous materials regulatory requirements. However, Program EIR Mitigation Measure 4.G-2d (MM HAZ-1d) only addresses remediation for construction of trails on the southerly slope of Icehouse Hill and does not address additional remediation for other construction on Icehouse Hill, including relocation of the Mission Blue Nursery to the site of the former police shooting range. In addition, the Kinder Morgan fuel pipelines could be damaged during construction. Both of these impacts would constitute new significant impacts. Activities involved with installation of underground electrical lines, renewable energy generation and battery storage facilities, service connections, and connections to the Martin Substation were not part the project at the time of the Program EIR and were therefore not analyzed. Construction of these improvements would comply with applicable codes, California Public Utilities Commission and Independent System Operator Rules and Regulations, and PG&E requirements and therefore have less than significant environmental effects. In addition, cleanup of the former shooting range is addressed in the Program EIR by EPA guidelines. As such, the potential for exposure to lead exists during construction of trails and relocation of Mission Blue Nursery to the site of the former firing range. Construction impacts would therefore be significant even with implementation of Program EIR mitigation measures. Because Remedial Action Plans for Operable Units OU-SM and OU-2 and the Title 27 Landfill Closure Plan were not available at the time of the Program EIR, analysis of the 2025 Specific Plan project's consistency with these plans was undertaken. The analysis of Impact HAZ-1 concludes that Baylands development would be required to comply with the requirements of Remedial Action Plans for OU-SM and OU-2, restricting human interaction with contaminated soils or groundwater and that construction of buildings

[428] The regulatory context for Baylands development in relation to Hazards and Hazardous Materials is presented in Section 4.13.3.

Program EIR Significance Conclusions	Subsequent EIR Significance Conclusions
still present, exposure if dewatering is not handled appropriately. While current regulations and procedures would minimize the potential for accidental damage to existing underground fuel pipelines within the Project Site, the possibility remains that underground excavations would still damage a pipeline, with a resulting release of hazardous materials. Significant impacts would be avoided through compliance with federal, state, and local regulations pertaining to the handling and disposal of hazardous waste; implementation of a Soil and Groundwater Management Plan and a Master Deconstruction and Demolition Plan; and mitigation measures.	and infrastructure within the eastern portion of the Baylands would comply with applicable Title 27 Closure and Post-Closure Maintenance Plan requirements. Grading and construction activities in the vicinity of Kinder Morgan pipelines includes the potential of accidental loading or undermining of soils covering and underlying the pipeline, causing damage to the pipeline. Because current grading and development plans do not include specific provisions for protecting the structural integrity of the pipeline, a significant impact is assumed to result from Baylands development.
Impact 4.G-3: Emissions or Handling of Hazardous or Acutely Hazardous Materials within ¼ Mile of a School **Less than Significant** A charter high school and an elementary school are proposed. R&D, institutional, and commercial uses would entail the storage, handling, transport, and disposal of hazardous materials. If not managed appropriately, schoolchildren may be exposed to accidental spillage or leakage of the common hazardous materials (fuels, oils, lubricants, paints, cleaning chemicals, and other petroleum products) used onsite. A comprehensive set of federal, state, and local laws and requirements regulate the transportation, use, storage, and disposal of hazardous materials and wastes to reduce the potential risks of human and environmental exposure during post-construction operations of the land use types that would be permitted within the Baylands, particularly those operations occurring within 0.25 mile of a school. These programs also provide for training of workers to react to and contain accidental hazardous materials spills and other exposures to hazardous materials. The combination of these programs with Program EIR Mitigation Measure 4.G-3, which is to be incorporated into the Specific Plan EIR, would reduce impacts to less than significant.	**Impact HAZ-2: Emissions or Handling of Hazardous or Acutely Hazardous Materials or Waste Within ¼ Mile of a School** **Subsequent EIR Finding. A New Significant Impact Would Result from Substantial Changes to the Project:** • **Proposed middle school location would not meet all provisions of CCR Title 5, Section 14010.** A comprehensive set of federal, state, and local laws and requirements regulate the transportation, use, storage, and disposal of hazardous materials and wastes to reduce the potential risks of human and environmental exposure during post-construction operations of the land use types permitted within the Baylands, particularly those operations occurring within 0.25 mile of a school facility. These programs also provide for training of workers to react to and contain accidental hazardous materials spills and other exposures to hazardous materials. No significant impact would thus result in relation to proximity of facilities that handle or emit hazardous or acutely hazardous materials, substances, or waste. However, the proposed middle school locations do not meet all provisions of CCR Title 5, Section 14010 because they are: • Within 150 feet of PG&E's 230 kV underground electrical transmission line along Bayshore Boulevard. • Within 1,500 feet of the Caltrain railroad right-of-way. • Within 1,500 feet of a PG&E 24-inch high-pressure natural gas transmission pipeline. • Subject to liquefaction and cyclic densification during a design seismic event. Mitigation Measure MM HAZ-2 requires the proposed middle school to meet the standards set for in CCR Title 5, Section 14010 or to (1) prepare the required studies for review by the Department of Education and (2) secure approval of the proposed school site pursuant to the provisions of CCR Title 5, Section 14010(u). Existing state and federal programs provide for protection of school sites and also provide for training of workers to react to and contain accidental hazardous materials spills and other exposures to hazardous materials. MM HAZ-2 would ensure that the proposed school site would meet the design and safety

Program EIR Significance Conclusions	Subsequent EIR Significance Conclusions
	standards set forth in CCR Title 5, Section 14010 or demonstrate safety and provide mitigation for any hazards prior to approval pursuant to CCR Title 5, Section 14010(u). The impact would therefore be reduced to less than significant.
Impact 4.G-4: Development on a Hazardous Materials Site **Significant but Mitigable** The Project Site and adjacent areas include several sites that are included on databases listing hazardous materials pursuant to Government Code Section 65962.5 including the former Brisbane Landfill, OU-1 (now OU-SM), and OU-2, and the Schlage Lock facility. These sites have a long history of environmental investigation and cleanup efforts with additional remediation activities occurring in the future and are actively overseen by regulatory agencies (DTSC and RWQCB) to ensure that all remediation is completed to levels that protect human health and the environment. Although various portions of the Specific Plan area, including the former Brisbane Landfill, OU-SM, and OU-2, are included on databases listing hazardous materials pursuant to Government Code Section 65962.5, remedial action plans have been approved by state and county regulatory agencies. In addition, remediation and landfill closure will occur prior to Baylands development as required by Program EIR Mitigation Measure 4.G-2a, which is to be incorporated into the Specific Plan EIR. Substantial revisions to the Program EIR are, however, required to reflect state and county regulatory agency approvals, each of which is based on updated information. Changes to the project include offsite infrastructure improvements at the PG&E Martin Substation, which is subject to regulatory oversight related to past cleanup activities and is therefore listed pursuant to Government Code Section 65962.5. New analyses and substantial revisions to the Program EIR are required to determine whether the potential for exposure of workers, the public, and the environment to hazardous materials associated with improvements at the PG&E Martin Substation would have significant effects not previously disclosed in Program EIR.	**Impact HAZ-3: Development on a Hazardous Materials Site** **Subsequent EIR Finding. No New or Substantially More Severe Significant Impact Would Result** Various portions of the Baylands, including the former Brisbane Landfill, OU-SM, and OU-2, are included on databases listing hazardous materials pursuant to Government Code Section 65962.5. site remediation and landfill closure pursuant to plans approved by state regulatory authorities would occur prior to Baylands development. In addition, the only off-site location where Baylands-related off-site infrastructure is proposed is the PG&E Martin Substation, which is subject to regulatory oversight related to past cleanup activities. Thus, the potential for exposure of workers, the public, and the environment to hazardous materials within sites included on databases listing hazardous materials pursuant to Government Code Section 65962.5 would be less than significant.

Program EIR Significance Conclusions	Subsequent EIR Significance Conclusions
Impact 4.G-5: Safety or Noise Hazards Due to Aircraft Operations **No Impact** The Project Site is located more than 2 miles from the nearest public airport (SFO) or airstrip and is not located within an airport land use plan. Development under any of the proposed scenarios would not conflict with an airport land use plan nor present any other impact related to a public airport use or private airstrip.	**Impact HAZ-4: Safety or Noise Hazards Due to Aircraft Operations** **Subsequent EIR Finding. No New Significant Impact Would Result** The Baylands is located more than 2 miles from San Francisco International Airport (SFO) and is not located within an Airport Safety Compatibility Zone, FAA Notification Area, Airport Imaginary Surface area per 14 CFR Part 77, or the 65 decibel (dB) noise contour of the airport. The Airport Land Use Compatibility Plan does not identify any land use restrictions due to the location of the Baylands in relation to SFO. The Specific Plan area is, however, identified in the Airport Land Use Compatibility Plan as being within the SFO Airport Influence Area A – Real Estate Disclosure Area. Anyone offering subdivided property for sale or lease is required to disclose the presence of SFO per Section 11010 of the California Business and Professions Code. Thus, Baylands development is consistent with the adopted Comprehensive Airport Land Use Compatibility Plan for the Environs of San Francisco International Airport and would not result in a safety hazard or excessive noise for people residing or working in the Specific Plan area due to aircraft operations.
Impact 4.G-6: Emergency Preparedness **Less than Significant** Circulation plans are designed to ensure appropriate emergency access to and egress from the Project Site under all four scenarios. The Project reserves a specific site for a centrally located fire facility. Adequate access to and from this facility would be provided by the roadway and circulation improvements proposed for each scenario. Additionally, all site-specific development site designs, including private internal circulation and building site plans, will be subject to review and approval by the City, as well as emergency service providers under each of the four development scenarios.	**Impact HAZ-5: Emergency Preparedness** **Subsequent EIR Finding. No New Significant Impact Would Result** Development review by the City of Brisbane, in combination with review by the North County Fire Authority, would ensure (1) availability of needed evacuation routes and access for emergency response personnel, (2) provision of adequate fire flow, (3) on-site safety measures, (4) implementation of measures to reduce the potential for emergencies, and (5) expansion facilities needed to respond to emergencies. Thus, Specific Plan development would not interfere with implementation of an adopted emergency plan, impede evacuation routes, or restrict access for emergency response or recovery.

9.3.12 HYDROLOGY AND WATER QUALITY[429]

Table 9-14: Program EIR and Subsequent EIR Hydrology and Water Quality Significance Conclusions

Program EIR Significance Conclusions	Subsequent EIR Significance Conclusions
Impact 4.E-5: Soil Erosion or Loss of Topsoil **Significant but Mitigable** Construction and remediation activities required for Project Site development, such as excavation, backfilling, grading, and placement of fill material for surcharging purposes can expose areas of loose soil subject to soil loss and erosion by wind and storm water runoff. At the Project Site, areas that are susceptible to erosion are those that would be exposed during the construction phase and along the shoreline where soil is subjected to wave action. However, construction contractors for the Project Site development would be required by law to obtain a National Pollutant Discharge Elimination System (NPDES) Permit for Discharges of Stormwater Associated with Construction Activities from the San Francisco Bay RWQCB- for all proposed construction as part of the proposed Project. Conditions of this permit would include preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP) as required by EIR mitigation measures. Once construction is completed, the interior areas of the Project Site would be largely developed, with open spaces being landscaped. As a result, few locations would be created that would be exposed to the forces that cause erosion. **Impact 4.H-1: Violate Water Quality Standards or Waste Discharge Requirements** **Significant but Mitigable** With the substantial amount of earthwork, grading, and remediation activities required for construction under any of the four Project Site development scenarios, water quality standards would be violated, resulting in a significant impact. In addition, Project Site development would result in changes to existing	**Impact HWQ-1: Water Quality Protection** **Subsequent EIR Finding. No New or Substantially More Severe Significant Impact Would Result** Stormwater treatment facilities have been substantially changed from those analyzed in the Program EIR. In addition, the Specific Plan's phased approach for improvements along Visitacion Creek and the north shore of the Brisbane Lagoon has the potential for causing erosion and siltation that were not addressed in the Program EIR. Grading and construction activities, including landfill closure and subsequent habitat and recreational improvements along Visitacion Creek and the north shore of the lagoon, would be required to comply with General Construction Activity (Construction General Permit, Order No. 2009-0009-DWQ, as amended by 2010-0014-DWQ and 2012-0006-DWQ) and the General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Order WQ 2022-0057-DWQ). Such compliance would reduce construction impacts to less than significant. Soils within the Baylands would be exposed and susceptible to erosion during and after grading until groundcover is established and again during construction of site-specific projects, as well as immediately after construction before groundcover is established. Grading and habitat restoration activities along Visitacion Creek and the north shore of the lagoon that are subject to tidal action would be particularly susceptible to erosion. Grading and construction contractors for Baylands development would be required to comply with General Construction Activity (Construction General Permit, Order No. 2009-0009-DWQ, as amended by 2010-0014-DWQ and 2012-0006-DWQ) and the General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Order WQ 2022-0057-DWQ NPDES NO. CAS000002). The Construction General Permit would require each onsite and offsite Baylands construction activity to minimize or prevent pollutants in stormwater discharges and authorized non-stormwater discharges through use of controls, structures, and management practices as set forth in the General Permit that achieve best available technology (BAT) for toxic and non-conventional pollutants and best conventional technology (BCT) for conventional pollutants. The General Permit also requires that each site-specific construction activity development be designed to ensure that stormwater discharges and authorized non-stormwater discharges will not: • Adversely affect human health or the environment; • Contain pollutants in quantities that threaten to cause pollution or a public nuisance; or

[429] The regulatory context for Baylands development in relation to Hydrology and Water Quality is presented in Section 3.14.3. Relevant Specific Plan provisions are presented in Section 3.14.4.

Program EIR Significance Conclusions	Subsequent EIR Significance Conclusions
drainage patterns that could affect water quality of stormwater runoff. **Impact 4.H-3: Alter Drainage Pattern so As to Cause Erosion or Siltation** **Significant but Mitigable** The DSP and DSP-V scenarios retain the existing drainage pattern of the Bayshore and Brisbane Lagoon drainage areas but alter the Beatty Avenue drainage area by redirecting runoff from approximately 47 acres away from Beatty Avenue to a proposed storm drain discharging to the Central Drainage Channel. The CPP and CPP-V scenarios propose similar substantial changes to existing drainage patterns, but preserve a larger amount of open space, reducing the amount of impervious surface area. Project Site development would not alter the actual existing course (location) of Visitacion Creek east of the railroad right of way but would daylight the currently subsurface portion of the creek from the railroad right of way east and extending to the Roundhouse. Development under each development scenario would collect and convey onsite runoff through a modified storm drainage system constructed in accordance with the City's requirements and regional MS4 NPDES permit requirements to accommodate the increase in runoff and changes to existing drainage patterns. **Impact 4.H-5: Exceed Capacity of Stormwater Drainage Systems; Increased Sources of Polluted Runoff** **Significant but Mitigable** Each scenario would substantially increase impervious surfaces and increase stormwater runoff volumes. There is a lack of adequate capacity in the Project Site's existing storm drainage system. While the CPP and CPP-V scenarios would result in a lesser increase in stormwater runoff than the DSP and DSP-V scenarios, they would still exceed the capacity of the existing system. Thus, development under each development scenarios would result in changes to existing drainage patterns that would result in flooding impacts onsite and offsite. Project Site development would introduce new impervious surfaces that would be the source of new stormwater runoff pollutants typical of urban settings, which, if not managed appropriately, would violate water quality standards. The	• Contain pollutants that cause or contribute to an exceedance of any applicable water quality objectives or water quality standards contained in an applicable water quality control plan. The Construction General Permit requires that site grading and site-specific development projects encompassing more than 1 acre: • Complete a risk assessment to determine pollution prevention requirements pursuant to the three risk levels established in the General Permit; • Eliminate or reduce non-stormwater discharges to storm sewer systems and other waters of the nation; • Develop and implement a SWPPP that identifies the sources of sediment and other sources that affect the quality of stormwater discharges and specifies BMPs that will reduce pollution in stormwater discharges to the Best Available Technology Economically Achievable/Best Conventional Pollutant Control Technology standards; and Perform inspections and maintenance of all BMPs. A SWPPP includes specific construction-related BMPs to prevent soil erosion and loss of topsoil. BMPs implemented could include, but would not be limited to, physical barriers to prevent erosion and sedimentation, construction of sedimentation basins, limitations on work periods during storm events, use of swales, protection of stockpiled materials, and a variety of other measures that would substantially reduce or prevent erosion from occurring during construction. It is not possible to identify the precise BMPs that would be required by SWPPPs for each Baylands construction activity over its 20-year buildout period and subsequent operations because (1) the BMPs to be implemented will be specific to each on- and off-site demolition, grading, and construction activity and location and (2) BMPs evolve with advancing technology over the project's 20-year buildout period as well as throughout subsequent operations. However, operational BMPs generally call for applying pesticides only as specified on the "Pesticide Use Recommendation" on the label. Because of the large area within the Baylands being landscaped, a significant water quality impact would nevertheless result. Implementation of Mitigation Measure HWQ-1 (Program EIR Mitigation Measure 4.H-5) would minimize use of chemical pesticides and herbicides within the Baylands and, in combination with NPDES permit requirements and compliance with SWPPPs and Provision C.3, would reduce impacts to less than significant.

Program EIR Significance Conclusions	Subsequent EIR Significance Conclusions
management of landscaped areas would also present the potential for runoff and/or infiltration of herbicides and pesticides. These common urban pollutants could be transported in runoff, potentially adversely affecting the surface and ground water quality.	
Impact 4.H-2: Deplete Groundwater Supply or Interfere with Groundwater Recharge **Less than Significant** Because no groundwater would be used for Project site development, groundwater supplies would not be substantially depleted, nor would the Project substantially interfere with groundwater recharge such that a net deficit in aquifer volume or a lowering of the local groundwater table level would occur.	**Impact HWQ-2: Groundwater Recharge and Sustainable Management** **Subsequent EIR Finding. No New Significant Impact Would Result** A different water source is proposed for the 2025 Specific Plan than was analyzed in the Program EIR. Provision of water by the California Water Service Company would not interfere substantially with groundwater recharge such that a net deficit in aquifer volume or a lowering of the local groundwater table level that could impede sustainable management of a groundwater basin or cause subsidence would occur for the following reasons: • Local groundwater is not proposed to be used for potable or non-potable purposes as part of Baylands development. • Provision C.3 of the NPDES Municipal Regional Stormwater Permit requires runoff during a storm event be retained or detained onsite such that post-development peak flows do not exceed pre-development conditions. Release of stormwater flows to unlined drainages in the Ecological Park and Visitacion Creek will reduce loss of groundwater recharge due to increased impervious surface area within the Specific Plan. • Title 27 requirements for final closure of the former Brisbane Landfill require installation of a landfill cap to prevent infiltration of from the ground surface through the waste matrix in the former landfill. Thus, loss of pervious surface area within the landfill footprint would be the result of final landfill closure, which is required to precede Baylands development, rather than as a result of Baylands development itself. • The Visitacion Valley groundwater basin that overlies the Baylands also overlies the Brisbane Lagoon, which will continue to recharge the basin. • Approximately 26 acres of the Baylands will become subject to daily inundation as the result of projected sea level rise, providing continuous recharge to the basin. • As a very low priority basin, compliance with Sustainable Groundwater Management Act within the Visitacion Valley Basin is not required.
Impact 4.H-4: Alter Drainage Pattern so As to Cause Flooding **Significant but Mitigable** Each development scenario analyzed in the Program EIR would add a substantial amount of new impervious area that would reduce the rate of infiltration of precipitation and increase the amount of runoff generated during a rain event. The CPP and CPP-V scenarios would add a lesser amount of new impervious area than the DSP and DSP-V scenarios, although the amount would still be substantial and increase runoff generated onsite. Thus, if	**Impact HWQ-3: Flood Hazards** **Subsequent EIR Finding. New and Substantially More Severe Significant Impacts Would Result Due to Substantial Changes to the Project:** • **Substantially more Severe significant impact. Revised drainage plan would allow flooding to occur that would hinder emergency response.** • **New significant impact. Revised drainage plan would cause flooding of basement areas along Frontage Road.**

Program EIR Significance Conclusions	Subsequent EIR Significance Conclusions
not properly designed, development would exacerbate existing flooding onsite and offsite. **Impact 4.H-6: Housing in a 100-Year Flood Area** **Significant but Mitigable** The DSP and DSP-V scenarios propose housing in areas that have been mapped as 100-year flood hazard areas based on existing topography. These areas are prone to flooding primarily due to insufficient capacities in the existing drainage system. The CPP and CPP-V scenarios do not propose residential use. **Impact 4.H-7: Flooding** **Significant but Mitigable** Development under all four development scenarios would allow development of structures in areas between Bayshore Boulevard and the Caltrain tracks that, as described under Impact 4.H-6 above, could become flooded during a 100-year storm event. As also discussed under Impact 4.H-4 above, Project Site development would be required to improve the existing system conveyance capacity to reduce flooding onsite and offsite. Mitigation Measures 4.H-1c, 4.H-4a, 4.H-4b, and 4.H-4c would require a Final Stormwater Management Plan and improvements to existing system deficiencies as mentioned above. Implementation of these mitigation measures is recommended under all four proposed development scenarios to reduce impacts related to the placement of structures within the flood zone. **Impact 4.H-8: Flooding due to Dam or Levee Failure; Sea Level Rise** **Significant but Mitigable** The Project Site is not located in any inundation area for any dams or reservoirs. Therefore, impact due to failure of a levee or dam would be less than significant for all four scenarios. Increases in sea level, if sustained for 50-100 years or more, could create or exacerbate existing coastal flooding hazards for the Project Site. While it is not possible to project exactly what the future effects of sea level rise will be within the Project site, over time, Project Site development would be subject to impacts related to sea level rise.	Proposed Baylands development would result in substantially more severe impacts by not fully implementing Program EIR Mitigation Measure 4.H-4a or 4.H-4b and new significant impacts by placing basement parking areas along Frontage Road that would be subject to flooding, cause damage to vehicles, and preclude emergency response access to all portions of development sites along Frontage Road. The 2025 Specific Plan project would provide adequate flood protection for new residential, commercial, and other uses within the Baylands as follows: • The peak flow rate from a 25-year storm event would be accommodated within designated drainage areas and an underground piping system; • The peak flow rate from a 100-year storm event would be accommodated within an underground piping system, within designated drainage areas, and within streets such that the finished floor elevations of buildings would have more than 1-foot of freeboard above the 100-year storm event hydraulic grade line water elevation with tidal flow and 100 years of estimated sea level rise; and • To provide this level of protection, the final design for Baylands drainage features, including Visitacion Creek would be required to utilize the capacity of the existing culvert under the US 101 freeway based on the culvert's actual and projected capacity rather than the theoretical capacity of the culvert. A significant impact would nevertheless result because the 2025 Specific Plan project's drainage system would not fully implement Program EIR Mitigation Measure 4.H-4a or 4.H-4b and ensure that Tunnel Avenue would be available as an evacuation route in a 100-year storm event. Proposed Baylands development would increase the site's impervious surface area and thereby increase flooding frequency, duration, or depth at two locations (Industrial Way – Bayshore Boulevard intersection; adjacent to the Kinder Morgan tank farm, Brisbane corporation yard, Caltrain right-of-way) but only "require measures by others to adapt to future conditions" to address increased flooding. In addition, Tunnel Avenue would not be available for emergency response or evacuation in the event of a 100-year flood even though the substantial increase in Specific Plan development would necessitate such use. With implementation of Program Mitigation Measures 4.H-4a and 4.H-4b (now numbered HWQ-3a and HWQ-3b), Baylands development would provide adequate flood protection for new residential, commercial, and other uses within the Baylands because: • Baylands roadways and recreational facilities would not be flooded since the 25-year storm's peak flow rate would be accommodated within designated drainage areas and underground drainage pipes; and • The peak flow rate from a 100-year storm event would be accommodated within underground drainage pipes, within designated drainage areas, and within streets such that the finished floor elevations of buildings would have more than 1-foot of freeboard above the 100-year storm event hydraulic grade line water elevation with tidal flow and 100 years of estimated sea level rise. However, basement parking areas along Frontage Road would be subject to flooding, which would cause damage to vehicles within such garages and preclude emergency response access to all portions of development sites along Frontage Road.

Program EIR Significance Conclusions	Subsequent EIR Significance Conclusions
	The addition of Mitigation Measure MM HWQ-3c would ensure adequate response access to all portions of development sites along Frontage Road, including basement parking areas, and would also ensure that Baylands development would not increase flooding frequency, duration, or depth of a 100-year storm on adjacent lands even with anticipated sea level rise of 6.5 feet through the Year 2100. Thus, impacts would be reduced to less than significant.
Impact 4.H-9: Seiche, Tsunami, Mudflow **Less than Significant** The Project Site is located in the western part of San Francisco Bay, which is not subject to potential flooding by wind-induced seiches because of the predominant eastward winds. In addition, seismically induced seiche waves have not been documented in the Bay. The Project Site is located in a relatively low-lying area in a developed urbanized region that is not susceptible to mudflows, and therefore Project Site development impacts would be less than significant. In addition, the Project Site is not susceptible to mudflows and therefore impacts would be less than significant.	**Impact HWQ-4: Release of Pollutants Due to Flood, Tsunami, or Seiche** **Subsequent EIR Finding. No New Significant Impact Would Result** The 2025 Specific Plan eliminates the previously proposed elevated offsite water storage tank location in favor of an onsite tank. In addition, an above-ground fuel storage tank is proposed at the relocated fire station. Geologic-induced seiche events were not analyzed in the Program EIR and have not been documented in San Francisco Bay largely since meteorologic effects are quickly dissipated. In addition, the Specific Plan area is not located within a tsunami hazard zone. The proposed water storage and above-ground fuel storage tank facilities would be constructed to applicable state and local requirements and would thus withstand and not rupture during an earthquake. Above-ground fuel tanks to be constructed at fire stations would also be provided with containment such that a leak would not be carried into streets, storm drain systems, Visitacion Creek, or the Brisbane Lagoon. The Specific Plan requires stormwater runoff to be treated prior to discharge to wetlands, Visitacion Creek, Brisbane Lagoon, or San Francisco Bay in compliance with Municipal Regional Stormwater NPDES Permit (MRP) Order No. R2-2022-018, NPDES Permit No. CAS612008 adopted by the San Francisco Bay RWQCB in May 2022. Appropriate source control, site design, and stormwater treatment measures that would be implemented are identified in: • The San Mateo Countywide Water Pollution Prevention Program C.3 Regulated Project Guide, which describes stormwater treatment options, techniques, design, and maintenance requirements. • The Green Infrastructure Design Guide, which is a comprehensive design guide for the design, construction, and maintenance of green infrastructure, including sustainable stormwater design (SMCWPP 2020a). Thus, release of pollutants due to flood, tsunami, or seiche would not occur.

9.3.13 GEOLOGY, SOILS, AND SEISMICITY[430]

Table 9-15: Program EIR and Subsequent EIR Geology, Soils, and Seismicity Significance Conclusions

Program EIR Significance Conclusion	Subsequent EIR Significance Conclusions
Impact4.E-1: Fault Rupture **Less than Significant** No known active fault traces across the Project Site, and the site is not located in an Alquist-Priolo Earthquake Fault Zone.	**Impact GEO-1: Fault Rupture** **Subsequent EIR Finding. No New Significant Impact Would Result** Because there are no known active or potentially active fault traces across the Baylands, and the site is not located in an Alquist-Priolo Earthquake Fault Zone, no impact related to rupture of a known earthquake fault would result.
Impact 4.E-2: Seismic Groundshaking **Significant but Mitigable** Geotechnical engineering methods for building design, underground utilities, and roadways (including bridge crossings) in accordance with California Building Code (CBC) requirements have been used throughout the Bay Area in areas where similar challenges of development on thick deposits of Bay Mud and imported fills have been encountered. In addition, impacts from a major seismic event would be further reduced by carrying out the site-specific analyses required by the CBC and the City Engineer. Chapter 16, Section 1613 of the CBC provides earthquake loading specifications for every structure and associated attachments that must also meet ASCE 07-05. This approach is required by Chapter 18, Section 1803 of the CBC. Site-specific investigations are used to obtain site-specific data, such as the depths of artificial fill and Bay Mud, to be considered along with the proposed loading (size of building) that would overlie that area for each specific structure within the Project Site. In general, deep foundation systems would be required for most Project Site structures to ensure that the proposed structures are founded on dense competent materials found at depth. The geotechnical report required by Mitigation Measure 4.E-2a would provide site-specific construction methods regarding grading activities, fill placement, soil corrosivity/expansion/ erosion potential, compaction, foundation construction, drainage control (both surface and subsurface), and avoidance of settlement, liquefaction, differential settlement, and seismic hazards. The	**Impact GEO-2: Seismic Groundshaking** **Subsequent EIR Finding. No New or Substantially More Severe Significant Impact Would Result** Updated geotechnical reports prepared for (1) Remedial Action Plans within the western portion of the Baylands approved by the Regional Water Control Board and the California Department of Toxic Substances Control and (2) Title 27 landfill closure in the eastern portion of the Baylands approved by the Regional Water Control Board and San Mateo County Environmental Health Agency provide updated recommendations for Specific Plan development. New structures for human occupancy would be required to conform to the seismic design parameters of the CBC, while restoration of the Roundhouse would be subject to CBC seismic standards for historic structures. Compliance with these requirements would be reviewed by the City of Brisbane for appropriate inclusion in the building plan check and development review process prior to issuance of grading and building permits. Generally, buildings that are constructed to code would withstand ground shaking forces of a minor earthquake without damage, of a moderate earthquake without structural damage, and of a major earthquake without collapse of the structure. In addition, critical facilities and structures (e.g., fire station) built to code would remain standing and functional following an earthquake. Baylands geotechnical studies prepared for this EIR (Appendices M.1, M.2) provide recommendations for compliance with CBC standards, state law, and building codes. Final geotechnical studies for each site-specific development project will define precise requirements for the foundation system for each building site needed for compliance with the CBC based on the site-specific engineering properties of the materials beneath the structure, combined with the intended loading (weight) of the structure itself.

[430] The regulatory context for Baylands development in relation to Geology, Soils, and Seismicity is presented in Section 4.16.3.

Program EIR Significance Conclusion	Subsequent EIR Significance Conclusions
report would also include stability analyses of final design cut and fill slopes, including recommendations for avoidance of slope failure(s). The final grading plan and associated development elements would be designed and constructed in accordance with requirements of the final design-level geotechnical investigation and would be submitted to the City Engineer prior to the issuance of building permits. Designers and contractors would comply with recommendations of the design-level geotechnical investigation during Project construction. The recommendations would be incorporated into all development plans submitted for site-specific development projects within the Baylands.	
Impact 4.E-3: Seismic-Related Ground Failure, Liquefaction **Significant but Mitigable** Analysis of site-specific soils data by Treadwell & Rollo in 2008 determined that liquefaction susceptibility at the former railyard area was relatively high. In contrast, a 2008 Geosyntec report suggested that the liquefaction risk for the Project site was low because of the depth to the sand and the type of subsurface material (i.e., clayey soils) and that further investigation would be necessary to pinpoint the site-specific liquefaction risk. Additional site-specific investigations would be required to determine the site-specific risk and appropriate foundation system design. The landfill portion of the Project Site may be more susceptible to liquefaction because it contains unknown buried materials that may be prone to liquefaction during strong ground shaking. Because the potential for liquefaction may be present at the site and would require site-specific analysis per California Building Code Chapters 16 and 18, implementation of Mitigation Measure 4.E-3 would be required to reduce liquefaction impacts to less than significant. **Impact 4.E-6: Development on Unstable Geologic Units or Soils, Including Subsidence or Collapse** **Significant but Mitigable** Settlement would occur in the former landfill, as well as in the overlying non-engineered fill and in natural deposits (Young Bay Mud, Old Bay Mud, etc.). Short- and long-term settlement within the Project Site is expected to be differential due to variances in deposit thickness and material properties. Additional fill placed within the Project Site as part of site development would increase	**Impact GEO-3: Liquefaction and Seismic-Related Ground Failure** **Subsequent EIR Finding. No New or Substantially More Severe Significant Impacts Would Result** Updated geotechnical reports prepared for (1) Remedial Action Plans within the western portion of the Baylands approved by the Regional Water Control Board and the California Department of Toxic Substances Control and (2) Title 27 landfill closure in the eastern portion of the Baylands approved by the Regional Water Control Board and San Mateo County Environmental Health Agency provide updated recommendations for Specific Plan development. Because of the presence of high groundwater and loose, unconsolidated soils underlying the Specific Plan area, which is located in a seismically active region, liquefaction could occur within the Baylands, adversely affecting structures. As documented in the updated geotechnical studies (Appendices M.1, M.2), a substantial risk of loss, injury, or death by exposing people or structures to secondary effects of seismic shaking (e.g., ground lurching, lateral spreading) would not result from Baylands development. Nevertheless, due to the presence of high groundwater and loose, unconsolidated soils underlying the project site, liquefaction within the Baylands following a major earthquake could result in loss of bearing pressure, lateral spreading, sand boils (liquefied soil exiting at the ground surface), and other potentially damaging effects if not addressed in geotechnical engineering design of buildings and infrastructure. Baylands development would be required to conform to site-specific foundation design parameters required for compliance with the CBC (Municipal Code Sections 15.01.210, Soils Engineering Report and 15.01.220, Engineering Geology Report), which are reviewed by the City of Brisbane for appropriate inclusion in the building plan check and development review process prior to issuance of grading and building permits. Site-specific geotechnical analyses building upon the information provided in the updated geotechnical studies prepared for the Baylands (Appendices M.1, M.2) would identify the specific seismic and foundation design parameters and monitoring to be required by the City for Baylands development to comply with the CBC based on site-specific geotechnical conditions and the precise location, height, massing, and bulk of each future building within the Baylands.

Program EIR Significance Conclusion	Subsequent EIR Significance Conclusions
total surface settlement. Consolidation of Bay Mud and tidal flat deposits and non-engineered artificial fill beneath proposed engineered fills may also be associated with differential settlement across the Project Site. Consolidation settlement is anticipated to occur between one and 30 years after fill placement. Based on geotechnical data collected for the Project Site, it is estimated that 6 to 30 inches of settlement may occur in the former landfill area and 12 to 38 inches of settlement may occur in the former railyard area. However, because studies for the western and eastern portions of the Baylands used different assumptions and methods, direct comparisons between settlement of the former landfill and railyard areas cannot be made. The potential for Project Site development to cause or be subject to collapse is very low based on the known characteristics of underlying materials. Collapse is considered to have a greater potential in soils with high porosities or low densities, such as windblown silt deposits known as Loess that are often found in more arid climates. The materials at the Project Site are denser and not considered susceptible to collapse. Because it is known that some degree of ground settlement would occur, implementation of Mitigation Measure 4.E-2a, which requires that all structures be designed and constructed in conformance with the most recently adopted California Building Code requirements, is required to reduce impacts to less than significant.	
Impact 4.E-4: Landslides **Significant but Mitigable** The underlying, or in some areas, exposed weak Bay Mud layer has the potential to fail under the proposed fills, which represent substantial additional. Slope stability analysis undertaken on a cross-section extending from the edge of Brisbane Lagoon approximately 1,000 feet toward the north for the former landfill area in 2008 estimated that possible slope instability extended north from the edge of the Lagoon approximately 600 feet. The geotechnical report recommended that fill not be placed within 600 feet of the north edge of the lagoon and that the stability of the area be re-evaluated once final designs are available. Geotechnical studies have concluded that placement of	**Impact GEO-4: Slope Stability** **Subsequent EIR Finding. A New Significant Impact Would Result from Substantial Changes to the Project:** • **Instability of underlying Bay Mud along the north shore of the lagoon caused by placement of fill for construction of habitat enhancements and Lagoon Park.** Site-specific development projects would comply with Brisbane General Plan policy requirements and the most recent California Building Code requirements for slope stability of manufactured slopes. Such compliance would ensure the stability of existing and manufactured slopes under static and pseudo-static conditions. Although manufactured slopes constructed as part of Baylands development would comply with the most recent California Building Code requirements at the time of construction, placement of fill within 600 feet of the north shore of the lagoon would be inconsistent with Program EIR Mitigation Measure 4.E-4a and could cause instability in the Bay Mud that underlies this area. While this measure, which is incorporated

Program EIR Significance Conclusion	Subsequent EIR Significance Conclusions
engineered fill may cause underlying Bay Mud to fail and recommended that additional subsurface exploration and static/seismic stability of the proposed slopes be analyzed prior to final design and construction. Generally accepted geotechnical practices for the San Francisco Bay Area regard a slope safety factor of 1.5 as suitable for development under static or non-earthquake conditions. For pseudo-static or non-earthquake conditions a lower safety factor is typically used because a higher factor cannot be practically achieved. Therefore, a safety factor of 1.2 for pseudo-static conditions is generally accepted practice in the Bay Area. Although not specifically addressed, given that the soils are potentially unstable under static conditions, soils beneath the Project Site are also likely unstable under dynamic conditions. Because Mitigation Measures 4.E-4a and 4.E-4b include minimum standards for slope stability to reduce the risk from static and dynamic slope instability, this impact would be reduced to a less-than-significant level.	into this EIR as Mitigation Measure MM GEO-4 exempts roadway improvements, habitat enhancement, recreational facilities, or other approved site improvements from the prohibition on placement of fills within 600 feet of the lagoon because such fills were anticipated to be relative shallow, it does not explicitly address the instability of underlying Bay Mud, which would result in a new significant impact. The addition of Mitigation Measure MM GEO-4b ensures that placement of fill materials within 600 feet of Brisbane Lagoon for habitat restoration and construction of Lagoon Park would not adversely affect the stability of underlying Bay Mud and would thus reduce Impact GEO-4 to less than significant.
Impact 4.E-5: Soil Erosion or Loss of Topsoil **Significant but Mitigable** Construction and remediation activities required for Project Site development, such as excavation, backfilling, grading, and placement of fill material for surcharging purposes can expose areas of loose soil. If not properly stabilized or protected, these soils and fills could be subjected to soil loss and erosion by wind and storm water runoff. Concentrated water erosion, if not managed or controlled, can eventually result in significant soil loss. Excessive soil erosion can also eventually lead to damage of building foundations and roadways. At the Project Site, areas that are susceptible to erosion are those that would be exposed during the construction phase and along the shoreline where soil is subjected to wave action. However, construction contractors for the Project Site development would be required by law to obtain a National Pollutant Discharge Elimination System (NPDES) Permit for Discharges of Stormwater Associated with Construction Activities from the San Francisco Bay RWQCB for all proposed construction as part of the proposed Project. Conditions of this permit would include preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP).	See Impact HWQ-1, Water Quality Protection, above.

Program EIR Significance Conclusion	Subsequent EIR Significance Conclusions
Once construction is completed, the interior areas of the Project Site would be largely developed, with the exception of open spaces, which would be landscaped. As a result, few locations would be created that would be exposed to the forces that cause erosion.	
Impact 4.E-7: Corrosive Soils **Significant but Mitigable** Because it is known that some degree of ground settlement would occur, this impact is considered significant. Implementation of Mitigation Measure 4.E-2a, which requires that all structures be designed and constructed in conformance with the most recently adopted California Building Code requirements, which set performance standards for building design in areas undergoing compaction, and that all final design and engineering plans be submitted by the licensed geotechnical engineer and subject to review and approval by the City Engineer to confirm that Project Site development meets those performance standards, is recommended for each of the proposed development scenarios. **Impact 4.E-8: Expansive Soils** **Significant but Mitigable** Soil conditions within the Project Site vary considerably, and expansive soils may exist in certain places, especially along Bayshore Boulevard, where Bay Mud is present beneath the fill. As required by Mitigation Measure 4.E-2a, a final design-level geotechnical report would be required to address the potential for expansive soils on each site-specific development within the Project Site, and to ensure that the performance standards set forth in the CBC are met. Development elements would be designed and constructed in accordance with requirements of the final design-level geotechnical report which include moisture content requirements along with minimum standards for expansion potential and would be submitted to the City for review and approval prior to the issuance of building permits. Characterization of the potential for expansive soil at the Project Site in accordance with standard geotechnical practices and building code requirements is required prior to issuance of building permits. Without final design and engineering plans based on parcel-specific evaluation of the expansion potential and since it is known that expansive soils are present with the Project Site, this impact is considered to be significant. Implementation of Mitigation	**Impact GEO-5: Expansive Soils and Soil Corrosivity** **Subsequent EIR Finding. No New or Substantially More Severe Significant Impact Would Result** Young Bay Mud underlying the Baylands is both expansive and corrosive. Existing state law and building codes provide for an adequate level of safety, and updated geotechnical studies (Appendices M.1 and M.2) provide recommendations for compliance with CBC standards, state law, and building codes that will be incorporated into site grading, as well as Baylands building and infrastructure construction. The foundation system for each building within the Baylands must be designed in accordance with the site-specific engineering properties of the soil characteristics beneath the structure and the specific loading characteristics of the building itself. Thus, to comply with the CBC: • All concrete and metals in contact with corrosive soil would be designed and constructed based on the results of the site-specific soil corrosivity testing and subsequent recommendations of a qualified geotechnical engineer as reviewed and approved by the City; and • Building foundations and infrastructure in contact with expansive soils would be designed and constructed based on the results of the site-specific soil corrosivity testing and subsequent recommendations of a qualified geotechnical engineer as reviewed and approved by the City.

Program EIR Significance Conclusion	Subsequent EIR Significance Conclusions
Measure 4.E-2a, which requires such site-specific investigations would reduce impacts to less than significant.	
Impact 4.D-3: Paleontological Resources **No Impact** No known paleontological resources or unique geologic features are located on the Project Site, nor is the Project Site geologically sensitive for paleontological resources. Even with the magnitude (substantial depth, extent, and volume) of proposed earthwork and cuts that would occur under Project Site development, including deep-driven piles into older bay muds, it is unlikely that construction crews would encounter paleontological resources or sites or unique geologic features.	**Impact GEO-6: Paleontological Resources** **Subsequent EIR Finding. A New Significant Impact Would Result due to Information not Available at the Time of the Program EIR:** • **Potential for disturbance of paleontological resources by deep excavations in the Colma Formation or Merced Formation.** An updated review of geologic records indicated disturbance of paleontological resources within the Colma Formation or Merced Formation would result in a significant impact due to their potential for paleontological resources. These formations are more than 25-30 feet below ground surface and the only deep excavations that would be undertaken for Baylands development within these formations would be pile foundation installation. Surficial and shallow excavations, which would make up the majority of ground-disturbing activity, have no potential to encounter or impact paleontological resources. Therefore, it is not likely that paleontological resources would be identified during ground disturbing within the Pleistocene Colma Formation or Pliocene-Pleistocene Merced Formation. While pile foundations, whether constructed by drilling or pile driving, would render any specimens irretrievable and construction of pile foundations within fossil-bearing formations is considered to be an environmental impact, paleontological resources could be encountered during other construction activities within the Pleistocene Colma Formation or Pliocene-Pleistocene Merced Formation. Implementation of Mitigation Measure MM GEO-4b would reduce impacts to paleontological resources to less than significant by requiring training of construction personnel in paleontological resource identification and requiring a qualified paleontologist to be retained in the event that paleontological resources are identified in order to address any inadvertent discoveries. Inadvertent discoveries of fossils would be collected by the paleontological monitor and/or qualified paleontologist, who would prepare, identify, and catalogue such discoveries prior to placing such discovered fossils at a public, non-profit institution, or public school for their preservation.
Impact 4.E-9: Use of Septic Tanks, or Alternative Wastewater Systems **No Impact** Wastewater services within the Project Site are currently provided by the Bayshore Sanitary District (BSD) in the area north of the Lagoon. BSD maintains wastewater collection facilities and contracts with the San Francisco Public Utilities Commission for wastewater treatment. None of the development scenarios would include the use of septic tanks or alternative wastewater disposal systems.	**Impact GEO-7: Use of Septic Tanks, or Alternative Wastewater Systems** **Subsequent EIR Finding. No New Significant Impact Would Result** Because the Baylands Specific Plan requires construction of an integrated sewer system connected to the Brisbane municipal sewer system, neither septic tanks nor alternative wastewater disposal systems would be used. Therefore, there would be no change from the Program EIR's conclusion that no impacts related to soils being incapable of supporting septic systems or other alternative wastewater disposal systems would occur.

9.3.14 UTILITIES, SERVICE SYSTEMS, AND WATER SUPPLY[431]

Table 9-16: Program EIR and Subsequent EIR Utilities, Service Systems, and Water Supply Significance Conclusions

Program EIR Significance Conclusions	Subsequent EIR Significance Conclusions
Impact 4.O-1: Water Supply **Significant but Mitigable** Because the City of Brisbane does not have adequate existing water supplies to serve proposed Baylands development under any of the four scenarios analyzed in the Program EIR, a surface water transfer of 2,400 AFY from the Oakdale Irrigation District (OID) to Brisbane was proposed along with an extensive water conservation program that included demand management measures and provision of recycled water via an onsite recycled water plant. In addition, existing water storage facilities would not provide adequate peak day / peak hour water flow to the Project in the event of an emergency. Additional storage capacity within the City was proposed to provide adequate fire flows and meet peak daily water demands. As the result of the proposed water transfer agreement, there would be a change in the amount of water released from Hetch Hetchy Reservoir flowing down the segment of the Tuolumne River between Hetch Hetchy Reservoir and New Don Pedro Reservoir. The proposed water transfer agreement would contribute to impacts to streamside meadows and other alluvial deposits along the Tuolumne River due to reduced flow releases in the reach of the river below Hetch Hetchy Reservoir to New Don Pedro Reservoir associated with the 2 mgd (2,400 acre-feet per year) OID-Brisbane water transfer. The SFPUC evaluated the effects of increasing diversions from the Tuolumne River and, in turn, reducing flow releases from Hetch Hetchy Reservoir on the Tuolumne River and its resources in the Program EIR it prepared on its Water System Improvement Program in 2008. By contributing a proportional share of the SFPUC's mitigation costs, Baylands impacts would be reduced to less than significant.	**Impact UTL-1: Water Supply** **Subsequent EIR Finding. No New or Substantially More Severe Significant Impact Would Result** The Specific Plan proposes a different water source (California Water Service Company or Cal Water) from what was analyzed in the Program EIR. The 2025 Specific Plan project proposes expanding Cal Water's South San Francisco water service district to encompass the Baylands, Sierra Point, and Beatty areas of Brisbane, which would make water now being provided by the City of Brisbane to these areas available for use throughout the rest of Brisbane. The proposed Cal Water supply would not require increasing Cal Water's contractual water supply, nor would new offsite facilities other than meters at existing turnouts from the regional water system be needed to provide potable water. A Water Supply Assessment (WSA) was prepared for and approved by Cal Water. The WSA concluded that adequate water was available to serve the portions of Brisbane proposed to be served by Cal Water in addition to existing and projected future demands for potable water within Cal Water's three service districts on the Peninsula. The Baylands Specific Plan and other future development projects would be required to participate in Cal Water's offsite development program and provide funding for expediting water supply expansion projects. Thus, impacts would be less than significant, and no new significant impacts would result.

[431] The regulatory context for Baylands development in relation to Utilities, Service Systems, and Water Supply is presented in Section 4.16.3. Relevant Specific Plan provisions are presented in Section 4.16.4.

Program EIR Significance Conclusions	Subsequent EIR Significance Conclusions
No adverse effect on SFPUC's regional water system capacity would result from Baylands development.	
Impact 4.O-2: Adequate Wastewater Treatment Capacity **Less than Significant** Wastewater generated by Baylands development would be discharged into the Bayshore Sanitary District system for treatment at the SFPUC Southeast Plant. Midway through Project Site development buildout (about year 15), an onsite recycled water plant would be constructed to produce recycled water to meet Baylands non-potable water needs and reduce potable water demand. The recycled water plant would reduce the liquid wastewater flows requiring conveyance and treatment. Adequate conveyance and treatment capacity are available in the BSD and SFPUC systems under existing contract arrangements to handle wastewater flows from Project Site development. As a result, wastewater flows from Project Site development would be properly treated and disposed of through existing facilities that comply with San Francisco Bay RWQCB wastewater treatment requirements. **Impact 4.O-3: New or Expanded Facilities** **Significant and Unavoidable** In the absence of information regarding location, design, and method of water storage facility construction, it must be assumed that constructing a new storage tank on a hillside could result in significant environmental impacts in areas such as visual resources, slope stability, erosion and water quality, and possibly biological resources. While it is likely that impacts of siting and constructing such a storage facility could be avoided or mitigated to less-than-significant levels through a combination of siting options and mitigation measures, at this time without site-specific information these impacts are considered to be significant and unavoidable. No water treatment facilities would be needed or constructed as part of Project Site development. The proposed new recycled water recycling facility and construction of stormwater facilities would contribute to significant impacts in relation to aesthetic resources, air quality, biological resources, cultural resources, and other areas, some of	**Impact UTL-2: New or Expanded Utility Facilities** **Subsequent EIR Finding. No New Significant Impact Would Result** Baylands development would not exceed Brisbane's 6.0 mgd capacity. In addition, the raw sewage, treated sewage, and waste activated sludge discharged to the SFPUC Southeast Treatment Plant would be sufficiently diluted so as to (1) not require any modifications to the plant or result in changes to water quality from treated wastewater and (2) not result in changes to water quality from treated wastewater discharged to San Francisco Bay. Other impacts related to new or expanded utility facilities have been addressed in other sections of this EIR. The 2025 Specific Plan proposes a different water source (California Water Service Company) and substantially different onsite water facilities along with new offsite recycled water pipelines that were not analyzed in the Program EIR. The 2025 Specific Plan also modifies the project to add utility-scale, building-mounted, and distributed battery storage facilities; an onsite switching substation; utility line connections to the PG&E Martin Substation; and improvements to the PG&E Martin Substation. These facilities could result in various significant impacts not previously analyzed in the Program EIR.

Program EIR Significance Conclusions	Subsequent EIR Significance Conclusions
which would be unavoidable with implementation of all feasible mitigation measures. **Impact 4.O-4: Wastewater Treatment Requirements** **Less than Significant** Construction and operation of an onsite recycled water plant would require detailed engineering design, development, and approval of wastewater treatment requirements by the San Francisco Bay RWQCB, and further project-level environmental evaluation specific to recycled water plant construction and operation. Whether it uses mechanical or natural scalping treatment, the water recycling facility would be designed and engineered to produce tertiary-treated effluent that conforms to the requirements of California Code of Regulations Title 22 for reuse of recycled water and would produce effluent that would be pumped directly to SFPUC for treatment.	
Impact 4.O-5: Landfill Capacity during Construction (Recycling and Diversion) **Less than Significant** Baylands construction would comply with Brisbane Municipal Code Chapter 15.75 requirements for solid waste diversion and recycling. **Impact 4.O-5: Landfill Capacity during Operations Construction (Recycling and Diversion)** **Less than Significant** Solid waste from Project Site development would represent a small portion of remaining landfill capacity with implementation of Brisbane Municipal Code requirements for recycling, recovery, and participation in programs to reduce the quantity of waste sent to landfills.	**Impact UTL-3: Waste Diversion** **Subsequent EIR Finding. No New Significant Impact Would Result** Baylands development would minimize solid waste generation and maximize diversion of solid wastes from landfills consistent with applicable solid waste management and reduction statutes, regulations, plans, policies, and strategies. Baylands development would meet the requirements of Brisbane Municipal Code Chapter 15.75 that a minimum of 65 percent of nonhazardous construction and/or demolition waste and 100 percent of inert solid material associated with excavations and land clearing operations, including trees, stumps and rocks be recycled and/or salvaged for re-use. Subsequent to certification of the Program EIR, Recology San Francisco became the solid waste collection and recycling agency for the Baylands. With Recology providing solid waste collection and recycling services, solid waste generated within the Specific Plan area would be delivered to a different transfer station, be subject to different waste diversion programs, and be delivered to a different landfill than was analyzed in the Program EIR. In addition, General Plan Amendment GP-1-18 requires the Specific Plan to be consistent with Brisbane Baylands Sustainability Framework principles, including zero waste and other issues that were not addressed in Program EIR. As a result, Baylands development would, at a minimum, participate in the same waste diversion programs provided by Recology operations to residential and commercial customers within the City and County of San Francisco, which exceed the requirements of state law and are more extensive than those currently available within Brisbane.

Program EIR Significance Conclusions	Subsequent EIR Significance Conclusions
Impact 4.O-5: Landfill Capacity during Construction **Less than Significant** Considering that (1) solid waste from Project Site construction would comprise a small proportion of remaining landfill capacity and would be generated and disposed of over a period of 30 years, and (2) landfill capacity is available through 2077, there is adequate existing landfill capacity to accept all Project Site construction waste. **Impact 4.O-5: Landfill Capacity during Operations** **Less than Significant** Considering that (1) solid waste from Project Site operations would comprise a small proportion of remaining landfill capacity and would be generated and disposed of over a period of 30 years, and (2) landfill capacity is available through 2077, there is adequate existing landfill capacity to accept all Project Site construction waste.	**Impact UTL-4: Landfill Capacity** **Subsequent EIR Finding. No New Significant Impact Would Result** Because Recology's Hay Road Landfill currently has daily capacity to accept solid waste from the Baylands and approximately 27,569,000 cubic yards of long term capacity with an estimated remaining site life of 38 years, the addition of 535 cubic yards of solid waste per day from the Specific Plan area on a peak construction day (3,054 tons) and 427 tons per day following construction would not exceed the permitted daily capacity of the Hay Road landfill or substantially reduce its life expectancy. Thus, new or expanded facilities would not be needed. As noted above, solid waste generated within the Specific Plan area would be delivered to a different transfer station, be subject to different waste diversion programs, and be delivered to a different landfill from what was analyzed in the Program EIR. New analysis and substantial revisions to the Program EIR are therefore required to determine whether the 2025 Specific Plan would result in new significant utilities impacts not previously disclosed in the Program EIR.

9.3.15 PUBLIC SERVICES AND FACILITIES[432]

Table 9-17: Program EIR and Subsequent EIR Public Services and Facilities Significance Conclusions

Program EIR Significance Conclusions	Subsequent EIR Significance Conclusions
Impact 4.L-1: Police Facilities **Significant but Mitigable** Implementation of Mitigation Measure 4.L-1 along with preparation and implementation of a Police Services and Facilities Plan would ensure that Project Site development-related increases in the demand for police services are met without overburdening Police Department response. The physical impacts associated with the construction and operation of a new Baylands police substation	**Impact PUB-1: Public Services and Facilities** **Subsequent EIR Finding. New Significant Impacts Would Result from Substantial Changes to the Project:** • **Proposed middle school location would not meet all CCR Title 5, Section 14010 standards.** • **Existing library and corporation yard would not be able to accommodate doubling of Brisbane's population.** • **Expanded library facilities required by Program EIR Mitigation Measure 4.L-4 not provided.** Changes to the project proposed by the 2025 Specific Plan include relocation of the City's existing fire station and construction of a new fire station within the Baylands to accommodate a new ladder truck

[432] The regulatory context for Baylands development in relation to Public Services and Facilities is presented in Section 4.17.3. Relevant Specific Plan provisions are presented in Section 4.17.4.

Program EIR Significance Conclusions	Subsequent EIR Significance Conclusions
were analyzed along with provision of needed mitigation measures throughout the Program EIR. **Impact 4.L-1: Fire Protection** **Significant but Mitigable** Development of the Project Site would more than double current demand for fire service within the City. To accommodate that demand and meet NCFA's emergency service response goals for the Baylands without impacting existing services being provided to the Brisbane community would require additional fire protection personnel and/or equipment. The Program EIR thus required preparation and implementation of a Fire Protection Services Plan that would provide for the timely provision of fire protection facilities, equipment, and staffing to meet NCFA fire protection standards. Site-specific development projects would be required to meet the NCFA standards related to fire hydrant placement, fire flow requirements, installation of fire protection devices, and other fire code requirements. All new structures built within the Project Site, including residential, commercial, and other non-residential uses would be required to comply with applicable building and fire code requirements, which include, for example, the installation of fire protection devices (such as extinguishers, fire alarms, and automatic sprinkler systems). **Impact 4.L-3: School Facilities** **Significant but Mitigable** Implementation of Program EIR Mitigation Measure 4.L-3 and the legally required payment of school fees would mitigate direct impacts on school facilities. Construction and operational related impacts of new school facilities were analyzed along with provision of needed mitigation measures in other sections throughout the Program EIR. **Impact 4.L-4: Public Libraries** **Significant but Mitigable** Project Site development would require expansion of library space to avoid impacting the capacity of existing facilities. The physical impacts associated with the construction and operation of new library facilities as required by Program EIR Mitigation Measure	company and a squad. In addition, relocation of the police firing range from Icehouse Hill to a satellite police facility within the Baylands is now proposed. Impacts associated with construction and operation of public facilities within the Specific Plan area would be indistinguishable from those of other construction, grading, and operations activities within the Baylands, the impacts of which are addressed throughout Chapter 4. For impacts related to police, fire protection, and schools that are distinguishable from the overall project no significant impacts would result for the following reasons: • Where the physical environmental effects associated with relocating the existing Fire Station No. 81 could be distinguished from the overall assessment of the Specific Plan, they are explicitly addressed in the Land Use and Planning Policy, Biological Resources, Cultural Resources and Tribal Cultural Resources, Air Quality, Greenhouse Gas Emissions, Noise and Vibration, and Hazards and Hazardous Materials sections, each of which determined a less than significant impact would result. • Since the existing Bayshore School was just remodeled and upgraded in 2017, only minimal exterior and interior improvement would be needed to convert the Bayshore School from a TK–8 school to a TK–5 elementary school. Impact PUB-1 would, however, be significant in relation to the onsite middle school, libraries, and the City's corporation yard for the following reasons: • Proposed locations for the onsite middle school would not meet all applicable provisions of CCR Title 5, Section 14010. Mitigation Measure MM HAZ-2 requires the proposed middle school to meet the standards set for in CCR Title 5, Section 14010 or to (1) prepare the required studies for review by the Department of Education and (2) secure approval of the proposed school site pursuant to the provisions of CCR Title 5, Section 14010(u). • The 2025 Specific Plan project would more than double Brisbane's existing resident and daytime worker population without expanding library facilities as required by Program EIR Mitigation Measure 4.L-4, which would result in overuse and deterioration of the existing Brisbane Library. • The existing corporation yard is not capable of storing sufficient equipment and maintain existing service levels for the City of Brisbane with the addition of Baylands' service demands. The result could be inadequate maintenance capability and deterioration of municipal infrastructure. Mitigation Measures MM PUB-1a through MM PUB-1c provide for expansion of facilities that would maintain existing service levels with the addition of Baylands service demands and avoid deterioration.

Program EIR Significance Conclusions	Subsequent EIR Significance Conclusions
4.L-4 were analyzed along with provision of needed mitigation measures in other sections throughout the Program EIR.	

9.3.16 RECREATIONAL RESOURCES[433]

Table 9-18: Program EIR and Subsequent EIR Recreational Resources Significance Conclusions

Program EIR Significance Conclusion	Subsequent EIR Significance Conclusions
Impact 4.M-1: Physical Deterioration of a Park or Recreational Facility **Less than Significant** The 2011 Specific Plan provided for park and recreational land in excess of Brisbane Municipal Code requirements and would therefore not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.	**Impact REC-1: Physical Deterioration of a Park or Recreational Facility** **Subsequent EIR Finding. No New Significant Impact Would Result** Although Baylands development would double the City's existing population and demand for park lands and community recreational facilities, Specific Plan development would substantially increase the availability of park land within Brisbane. In addition, Mitigation Measure MM REC-1 requires provision of community recreational facilities at a rate proportional to the community recreational facilities currently available within the City to Brisbane residents. Thus, the Specific Plan would not result in overuse or substantial deterioration of existing parks or recreational facilities within Brisbane.
Impact 4.M-3: Physical Deterioration of Candlestick Point Windsurfing Resources **Less than Significant** Baylands development would not reduce wind speeds enough to substantially impair windsurfing in prime windsurfing areas on San Francisco Bay or substantially impair access to or from those areas from the Candlestick Point State Recreation Area launch site.	**Impact REC-2: Physical Deterioration of Candlestick Point Windsurfing Resources** **Subsequent EIR Finding. No New Significant Impact Would Result** The 2025 Specific Plan substantially changes the project by modifying building heights and the configuration of building types. Updated Computational Fluid Dynamics simulations using a Large Eddy Simulation approach were undertaken to provide for a more accurate prediction of project effects on mean wind flows and transient phenomena such as turbulence than was available at the time of the Program EIR. Although Baylands development would cause some decrease in average wind speeds and increase in turbulence, updated computer simulations indicate that wind conditions within the majority of the Candlestick Point windsurfing area, including the launch area, would not be affected by Baylands development. Areas that would be affected are largely limited to 300-yard area along the shoreline, and the average changes in wind speed would generally be 1 to 2 mph, with changes in turbulence generally limited to 1 to 1.5 mph. Thus, Baylands development would not substantially degrade the existing wind-related recreational resource offshore from the Baylands within the Candlestick Point State Recreation Area.

[433] The regulatory context for Baylands development in relation to Recreational Resources is presented in Section 4.18.3. Relevant Specific Plan provisions are presented in Section 4.18.4.

9.3.17 WILDLAND FIRE

Table 9-19: Program EIR and Subsequent EIR Wildland Fire Significance Conclusions

Program EIR Significance Conclusion	Subsequent EIR Significance Conclusions
No Impact The Program EIR noted that the Specific Plan area was within an urban setting that was not considered wildlands and did not adjoin any wildlands that are at risk for wildfires. Wildland fire hazards were therefore not analyzed.	**Impact WLF-1: Exacerbate Wildfire Hazard** **Subsequent EIR Finding. A New Significant Impact Would Result due to Information that was Not Known and Could Not Have Been Known at the Time the Program EIR was Certified as Complete:** • **Updated statewide mapping of fire hazard zones designated a portion of the Baylands as having a moderate wildland fire hazard.** • **Updated statewide mapping of wildland-urban interface areas placed the Baylands adjacent to an interface area.** Sparks originating from construction activities would have the potential to ignite vegetation or other materials within or adjacent to the construction sites. Baylands development would be required to comply with the California Building Code, California Fire Code, and Municipal Code fire prevention and weed and flammable waste abatement requirements, which will ensure that required safety measures are incorporated into all building designs. However, human use of trails constructed through or adjacent to habitat areas as well as recreational improvements on Icehouse Hill have the potential for ignition of dry vegetation. Mitigation Measure MM WLF-1 identifies specific precautions to be taken prior to and during construction activities that occur within or adjacent to non-irrigated vegetated areas and ensures that crew have been trained in the use of the equipment to extinguish small fires. By minimizing minimize the risk of construction-related fire ignition, implementation of MM WLF-1 would also minimize the potential for a wildfire to spread and expose people to pollutant concentrations from a wildfire or cause a substantial risk of loss, injury, or death due to downslope or downstream flooding or landslides as the result of runoff, post-fire instability, or drainage changes.

CHAPTER 10 EIR PREPARATION STAFF AND RESOURCES

This Draft Environmental Impact Report was prepared by the City of Brisbane with assistance from a consulting team of environmental planners, engineers, and scientists.

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c. Peer Review of Technical Reports and Analyses That Were Prepared under Contract to the Applicant

Brisbane Baylands Infrastructure Report

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Baylands Bayshore Roundhouse Stabilization and Rehabilitation Plan

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10.3 PERSONS AND ORGANIZATIONS CONSULTED

10.3.1 CITY OF BRISBANE

Jeremy Dennis, City Manager (current)
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John Swiecki, AICP, Community Development Director
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Jerry Flanagan, Public Works Deputy Director - Utilities
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10.3.2 PUBLIC AGENCIES AND UTILITIES

Bayshore Elementary School District

Elizabeth Veal, Superintendent

California Water Company

Shilen Patel, Chief Corporate Development Officer
Scott Wagner, Director of Distribution and Operations Engineering

Jefferson Union High School District

Toni Presta, Superintendent

North County Fire Authority

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San Francisco Public Utilities Commission

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San Mateo County Libraries

Anne-Marie Despain, Director

10.3.3 APPLICANT

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